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Oceanic Observations of the Pacific

OCEANIC OBSERVATIONS OF THE PACIFIC

1951

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Preface

Oceanic Observations of the Pacific is a medium for publication of oceanographic data collected in the Pacific Ocean and its adjacent seas by the cooperating agencies. At the present time these agencies are Scripps Institution of Oceanography of the University of California, San Diego, California; Biological Laboratory of the Bureau of Commercial Fisheries, Honolulu, Hawaii (formerly Pacific Oceanic Fishery Investigations); Biological Laboratory of the Bureau of Commercial Fisheries, La Jolla, California (formerly South Pacific Fishery Investigations); Department of Oceanography of the University of Washington, Seattle, Washington; Pacific Oceanographic Group of the Fisheries Research Board of Canada, Nanaimo, British Columbia; United States Navy Electronics Laboratory, San Diego, California. Certain cruises were carried out jointly as California Cooperative Oceanic Fisheries Investigations (CCOFI). The agencies cooperating in the program are the Scripps Institution, the Biological Laboratory of the Bureau of Commercial Fisheries, La Jolla, the California Department of Fish and Game, the Hopkins Marine Station and the California Academy of Sciences.

In addition to the cooperating agencies, the United States Naval Oceanographic Office (formerly United States Navy Hydrographic Office) participated in one of the cruises presented in this volume. It is hoped that agencies engaged in oceanographic studies of the Pacific will utilize this serial for the publication of data.

The present volume contains all those observations made in 1951 by the cooperating agencies. For each oceanographic station, values of temperature, salinity, oxygen or phosphate are tabulated at observed and at standard depths. Computed values of density, specific volume anomaly or thermosteric anomaly, and geopotential anomaly are also tabulated at standard depths. The positions of serial observations and the numbers of bathythermograph observations made during the period 1941 to 1951, and those made in 1951, are shown on charts. Information concerning cruises on which the observations were taken is summarized in a table.

2-27-52

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Description of Observations

SIGNIFICANCE OF REPORTED OCEANOGRAPHIC DATA

Routine field measurements of oceanographic parameters by conventional methods are usually subject to at least the following random errors:

depth	±4 m (in the upper 1000 m)
temperature	±0.02°C
salinity	±0.03‰
oxygen	±0.04 ml/L
phosphate	±0.05 to 0.1 μg at/L

A recent analysis of the precision of field measurements of temperature and salinity is that of Wooster and Taft (1958). It should be noted that the above estimate of salinity precision refers to analyses by Knudsen titration.

Interpolated values at standard depths are known with less precision, and the resulting uncertainty in specific volume anomaly and thermosteric anomaly at standard depths due to random errors in field measurements of temperature, salinity and depth is of the order of three cl/ton. Therefore, in this publication series it is the practice to report specific volume anomaly and thermosteric anomaly to no more than one part in 10^5 (one cl/ton) and geopotential anomaly to no more than the nearest dynamic centimeter.

It should be noted also that computations of salinity (from measured chlorinity) and density (sigma-t, specific volume anomaly and thermosteric anomaly) reported in this volume have all been based on the empirical equations and tables by Knudsen (1901) and Ekman (1908). Because of the inadequacy of our present knowledge of the equation of state of sea water (Eckart, 1958) and the uncertainty of the relationship between chlorinity and salinity (Carritt and Carpenter, 1959), it is possible that these computed values differ systematically from the absolute values. However, in the upper thousand meters at least, Reid (1959) has shown that the influence of such systematic errors on the accuracy of computed geostrophic flow is significantly smaller than the influence of errors in the determination of temperature, salinity, pressure and position.

NOTES ON PARTICULAR CRUISES

California Cooperative Oceanic Fisheries Investigations

It has been found that nearly all of the salinity data collected by CCOFI in 1951 are subject to substantial error. The water samples were stored with unsatisfactory seals for several months and evaporation occurred before titration. The extent of evaporation has been estimated by comparing the 1951 results with earlier and later data in the depth range of 500 to 1000 meters, and, for a number of cruises on which the 10-meter samples had been titrated immediately at the end of the cruise, a comparison was made with the corresponding surface samples titrated much later. These comparisons show evaporation from nearly all samples. The mean of the resulting change in salinity on the various cruises was from 0.0032‰ (5102, RV Black Douglas, not significant) to 0.175‰. Salinities from cruises where the mean evaporation caused changes of more than 0.06‰ are not tabulated in this volume. However, evaporation was not uniform by cruises. Depth-by-depth and station-by-station differences from the more dependable data have standard deviations from 0.05 to 0.12‰ for the various cruises. Salinities from cruises with such standard deviations greater than 0.075‰ have also been eliminated.

All published CCOFI salinity values, except the 10-meter and those of a few special samples titrated at the end of the cruise and of the RV Black Douglas on Cruise 5102, are marked "E," indicating that evaporation is known to have occurred. For each cruise the mean and standard deviations are given in a footnote following the first station of the cruise.

Expedition Northern Holiday

The final processing of data collected on Expedition Northern Holiday was supported by a grant of the National Science Foundation.

The salinity data collected on Northern Holiday are considered unreliable, and they are not reported in this volume. The sample bottles were inadequately sealed at sea, and apparently most of the water samples underwent some evaporation before analysis ashore. Examination of salinity values reported for observed depths greater than 1000 meters indicated about two hundred values in excess of 34.70‰, the considered maximum for the deep water of the North Pacific Ocean; several values were above 35‰. The amount of evaporation varied widely and unsystematically.

HMCS Cedarwood, Cruises C-1 and C-2

Interpolation for values at standard depths and determination of calculated depths were carried out by machine program at the U. S. Naval Oceanographic Office, Washington, D. C. Interpolations were made by the three-point Lagrange method (U. S. N. Hydrogr. Off., 1960).

USS Burton Island

Interpolation for values at standard depths and determination of calculated depths were carried out by machine program at the U. S. Naval Oceanographic Office, Washington, D. C. Interpolations were made by the three-point Lagrange method (U. S. N. Hydrogr. Off., 1960).

USS Marysville

Interpolation of temperature and salinity data and computations of geopotential anomaly were made by the Data Collecting and Processing Group of the Scripps Institution of Oceanography.

Cruise	Vessel	Dates of obs	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	No. of BT obs
CCOFI								
5101	Crest[a]	9-23 i	5	8	34	1	48	154[b]
	Horizon	10-24 i	11	8	28	1	48	132[b]
	N. B. Scofield	19-29 i	6	9	18	0	33	70[b]
5102	Black Douglas	9-25 ii	9	11	28	2	50	62[b]
	Crest	6-23 ii	13	5	30	3	51	112[b]
5103	Black Douglas	8-23 iii	4	6	36	2	48	176[b]
	Crest	8-19 iii	4	8	32	4	48	94[b]
	Horizon	8-22 iii	6	9	23	4	42	123[b]
5104	Black Douglas	3-16 iv	8	6	27	4	45	40[e]
	Crest	6-17 iv	7	3	35	4	49	106[b]
	Horizon	3-17 iv	5	5	34	4	48	112[b]
5105	Black Douglas	2-15 v	11	4	18	2	35	32[e]
	Crest	3-15 v	3	10	34	3	50	94[e]
	Horizon	1-16 v	6	5	34	4	49	116[b]
5106	Black Douglas	7-20 vi	5	7	31	3	46	157[b]
	Crest	31 v-11 vi	7	5	30	4	46	42[e]
	Horizon	31 v-14 vi	13	2	16	0	31	126[b]
	Yellowfin	30 v-10 vi	7	5	14	0	26	31[e]
5107	Black Douglas	3-20 vii	7	8	32	3	50	118[b]
	Crest	29 vi-6 vii	6	6	14	2	28	82[b]
	Paolina-T	1-16 vii	3	3	25	2	33	31[e]
5108	Black Douglas	2-16 viii	15	3	25	0	43	198[f]
	Crest	31 vii-11 viii	11	15	21	0	47	224[f]
	Paolina-T	2-14 viii	14	3	23	0	40	268[f]
5109	Black Douglas	1-13 ix	13	10	21	0	44	205[f]
	Crest	31 viii-12 ix	20	6	23	0	49	300[f]
	Paolina-T	30 viii-9 ix	19	9	18	0	46	223[f]
5110	Black Douglas	26 ix-6 x	20	10	12	0	42	157[e]
	Crest	30 ix-8 x	16	3	21	0	40	234[f]
	Paolina-T	27 ix-7 x	9	7	20	0	36	36[e]
5111	Black Douglas	30 x-11 xi	21	3	19	1	44	278[f]
	Crest	31 x-12 xi	17	6	21	3	47	207[f]
5112	Horizon	28 xi-9 xii	15	3	21	0	39	76[e]
	Yellowfin	25 xi-5 xii	15	5	14	0	34	120[e]

Depth determination								
O_2	PO_4-P	Usual No. Nansen btls	No. P therms/btl	Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
45	0	15	2	9	Thermitow	46[c]	GEK	Determination of chlorophyll a; Secchi disc measurements
0	0	15	2	9	Thermitow	49[c]	-	Determination of chlorophyll a; Secchi disc measurements; microplankton samples; photoelectric solar radiation studies
31	0	15	2	9	-	30[c]	-	Determination of chlorophyll a; Secchi disc measurements
49	35	15	2	9	Thermitow	49[c], 4[d]	-	Microplankton samples
49	31	15	2	9	Thermitow	49[c]	GEK	-
47	26	15	2	9	Thermitow	47[c], 3[d]	-	Microplankton samples
45	45	15	2	8	Thermitow	45[c], 1[d]	GEK	-
39	40	15	2	9	-	44[c]	-	-
45	0	15	2	9	Thermitow	43[c], 4[d]	-	-
46	46	15	2	9	Thermitow	47[c], 1[d]	GEK	-
46	45	15	2	9	-	48[c]	-	-
33	32	15	2	9	-	32[c]	-	Determination of chlorophyll a; Secchi disc measurements
47	46	15	2	10	Thermitow	47[c], 3[d]	GEK	Determination of chlorophyll a; Secchi disc measurements
48	48	15	2	9	Thermitow	49[c]	-	Determination of chlorophyll a; Secchi disc measurements
0	0	10	2	7	Thermitow	43[c], 2[d]	-	-
42	42	12	2	7	-	42[c], 3[d]	-	-
30	27	11	2	7	Thermitow	47[c], 3[d]	-	Special fathometer studies
0	0	11	2	6	-	37[c]	-	-
46	0	11	2	9	Thermitow	45[c], 3[d]	-	Samples for CO_2 and pH determinations
26	25	11	2	7	Thermitow	25[c]	-	-
0	0	11	2	7	Thermitow	36[c]	GEK	-
39	42	11	2	7	Thermitow	42[c]	-	-
46	45	11	2	8	Thermitow	47[c], 1[d]	-	-
0	0	11	2	7	Thermitow	39[c]	-	-
44	44	11	2	6	Thermitow	45[c], 1[d]	-	Phytoplankton samples
48	44	11	2	6	Thermitow	46[c], 2[d]	-	-
0	0	12	2	6	Thermitow	43[c]	-	-
38	0	12	2	9	Thermitow	40[c], 1[d]	-	-
40	0	12	2	9	Thermitow	40[c], 1[d]	-	-
0	0	14	2	9	Thermitow	36[c]	-	Phytoplankton samples
44	0	15	2	9	Thermitow	43[c]	-	-
44	45	15	2	9	Thermitow	46[c]	GEK	Phytoplankton samples
39	21	16	2	10	Thermitow	27[c], 2[d]	GEK	Phytoplankton samples; collections by Hardy plankton sampler and midwater trawl
0	0	16	2	10	Thermitow	37[c], 2[d]	-	-

Cruise	Vessel	Dates of obs	Number and depths of hydrographic stations 0-500 m	500-1000 m	1000-2000 m	>2000 m	Total	No. of BT obs
SIO/USNEL/ONR								
Northern Holiday	Horizon	1 viii-23 ix	1	5	17	42	65	108[g]
HBL								
HMS-8	Hugh M. Smith	15 i-12 iii	35	14	55	0	104	534[h]
HMS-10	Hugh M. Smith	19-31 vii	4	5	25	0	34	169
HMS-11	Hugh M. Smith	25 ix-4 x	2	4	17	0	23	382[j]
HMS-12	Hugh M. Smith	24 x-1 xi	4	1	25	0	30	147
POG								
C-1	HMCS Cedarwood[k]	4-24 v	37	44	1	0	82	185[l]
C-2	HMCS Cedarwood	18 vii-14 viii	79	18	39	0	136	259[l]
USNEL								
	USS Marysville	7-14 vi	0	0	1	4	5	108[p]
USNOO/USNEL/UW SIO/ONR								
Cruise 2	USS Burton Island	31 i-23 ii	26	0	0	0	26	69[q]

General Methods

Unless otherwise indicated, subsurface temperature by paired protected reversing thermometers; salinity by Knudsen method; dissolved oxygen by Winkler method aboard ship, nominal accuracy ± 0.04 ml/L; inorganic phosphate by the molybdenum-blue method (Wooster and Rakestraw, 1951).

When available, specific information on accuracy is indicated by footnotes. Absence of such information does not necessarily imply that the nominal accuracies have been achieved.

a CCOFI thermometer calibrations indicate a temperature accuracy of 0.02°C; field tests indicate salinity accuracy of ± 0.025‰ (root mean square).
b On station and at approximately hourly intervals between stations.
c Oblique plankton tow to approximately 140 m (200 m of wire out, or less in shallow water) taken with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length.
d Oblique plankton tow to approximately 420 m (600 m of wire out, or less in shallow water) taken with a 30XXX net, 1.0 m in diameter at mouth by approximately 5 m in over-all length.
e On station and at irregular intervals between stations.
f On station and at approximately hourly or half-hourly intervals between stations.
g On station and at hourly or irregular intervals between stations.
h Two lowerings at each hydrographic station and one at approximately 20- to 30-mile intervals between stations (at 10-mile intervals between the equator and 5° to 7°N).
i During the southbound leg, five lowerings at each fishing station and one at each 10-mile interval between stations; on the return section, at 10-mile intervals between 5°S and 12°N and at 30-mile intervals from 12° to 19°N.

INFORMATION (cont.)

O_2	PO_4-P	Depth determination: Usual No. Nansen btls	Depth determination: No. P therms/btl	Depth determination: Btls w/U therms	Surface T underway	Plankton tows	Surface currents	Other measurements and observations
61	60	15	2	9	Thermitow	198	GEK	SOFAR studies; biological studies; midwater trawl collections; recording of bottom profile by fathograms (Mendocino escarpment, Gulf of Alaska and area northeast of Hawaiian Islands); sampling of bottom sediments by cores; bottom surface samples by deep dredging (northern ridge of Mendocino escarpment and seamounts in Alaskan basin); survey of submarine mountains in Gulf of Alaska
104	30[i)]	13	2	9	1/BT ob	87[d)]	-	Longline fishing for skipjack
34	0	13	2	9	1/BT ob	33	-	Longline fishing for skipjack
23	22	13	2	9	1/BT ob	50	-	Longline fishing for skipjack
30	0	13	2	9	1/BT ob	30	71 GEK	Longline fishing for skipjack
0	0	16[m)]	1	1[n)]	-[o)]	0	-	-
0	0	16[m)]	2	1[n)]	-[o)]	0	-	-
0	0	0	0	0	-	0	-	-
0[r)]	0[s)]	0	0	0	Thermitow[t)]	24[u)]	Ekman meter	Samples for PO_4-P and SiO_3-Si determinations; 8 bottom sediment samples; ice cores; 17 subsurface current measurements by Ekman meter, generally at 25 m; Thermitow measurements, temperature by bucket thermometer

j Dissolved inorganic phosphate by the automatic servo-operated photometer (Snodgrass et al., 1954). Data obtained at Stas. 1 through 76 not tabulated because values considered untrustworthy; stannous chloride solution improperly protected from exposure to air and oxidation of stannous ion resulted.

k POG thermometer calibrations indicate the temperature accuracy is ±0.03°C; salinity values are estimated to be accurate to ±0.02‰.

l BT lowering immediately before and after the hydrographic cast and at intervals between stations; 450- and 900-ft instruments used.

m Fjarlie, R. L. I., 1953. A seawater sampling bottle. J. Mar. Res., 12(1): 21-30.

n On deepest bottle.

o Surface temperature at BT observation.

p At hourly intervals.

q On station and at 2-hourly intervals between Stas. 29 to 71.

r 146 oxygen samples collected during cruise; none included in this volume.

s Phosphate samples collected during cruise; none included in this volume.

t Trace obtained from San Diego to Kodiak to Bering Sea; on return trip, trace from ice edge to Seattle.

u 10 plankton net hauls, 5 plankton surface hauls and 9 vertical hauls at depths from 20 to 60 m.

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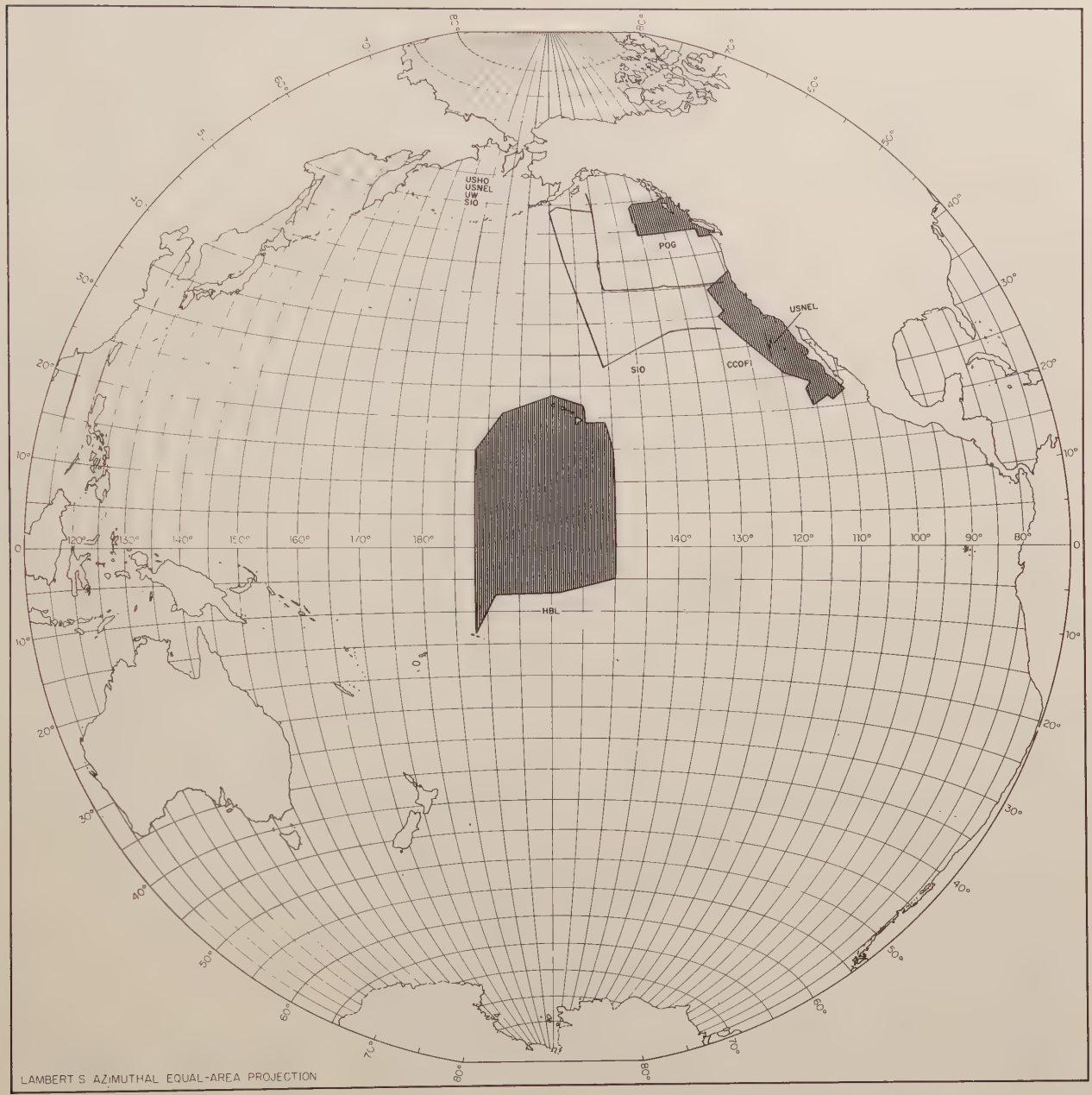

CHART 1. General location chart

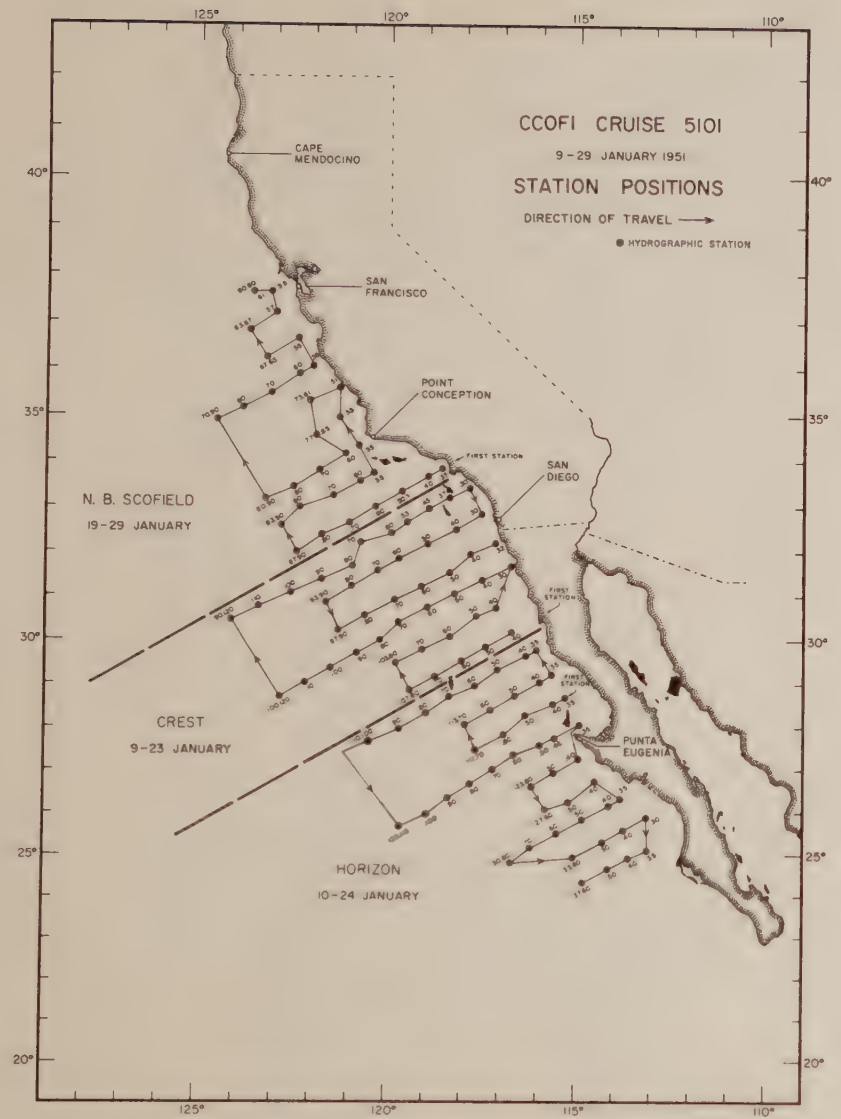

CHART 2. Station positions, CCOFI, Cruise 5101

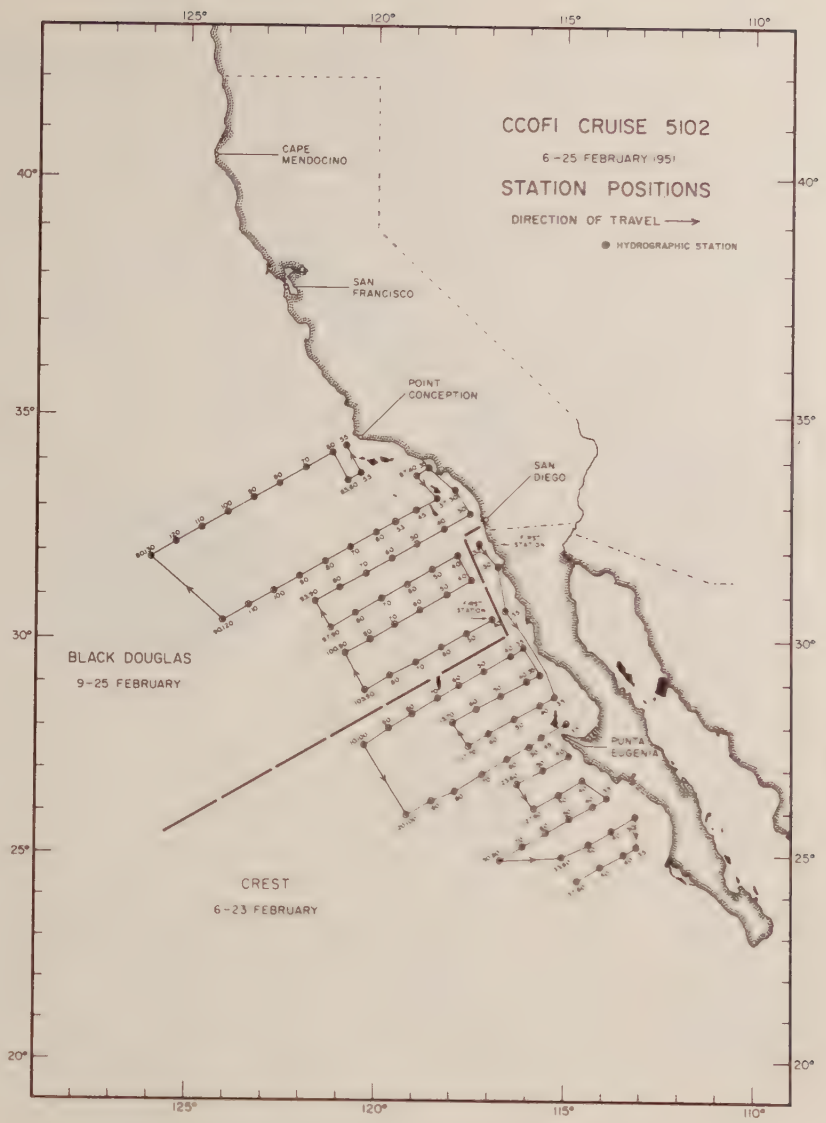

CHART 3. Station positions, CCOFI, Cruise 5102

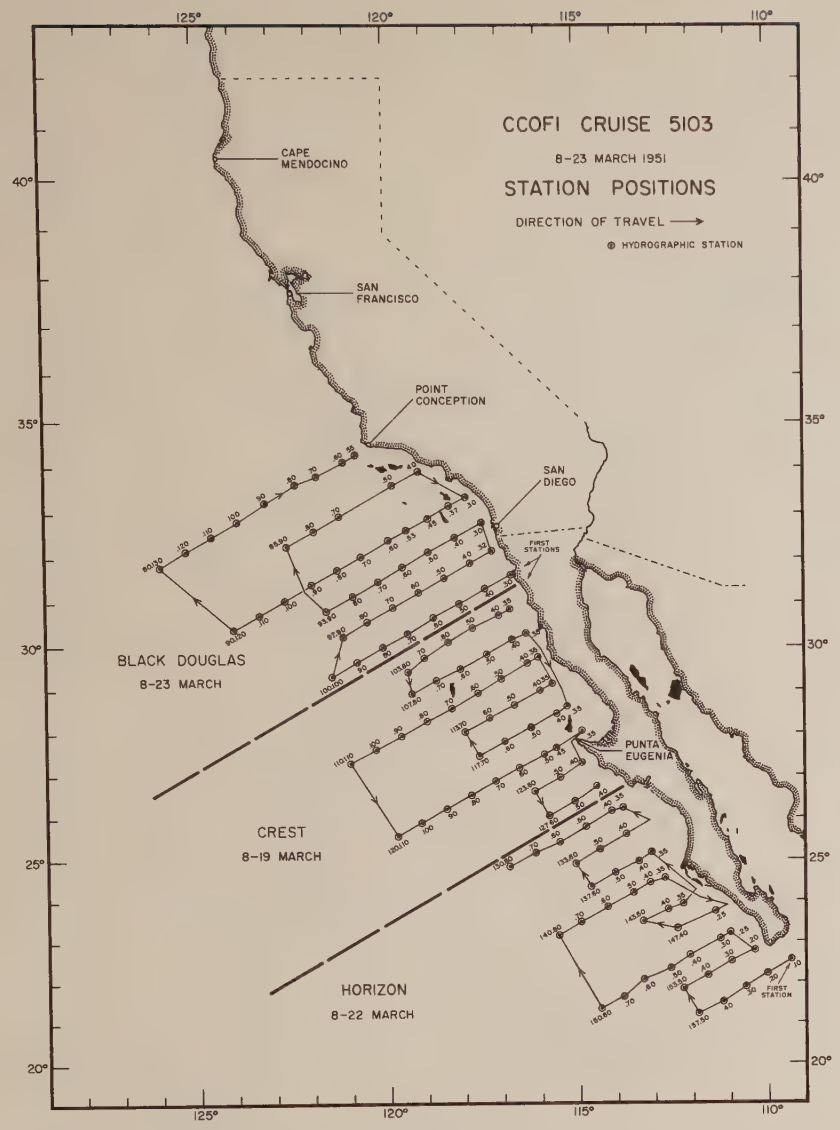

CHART 4. Station positions, CCOFI, Cruise 5103

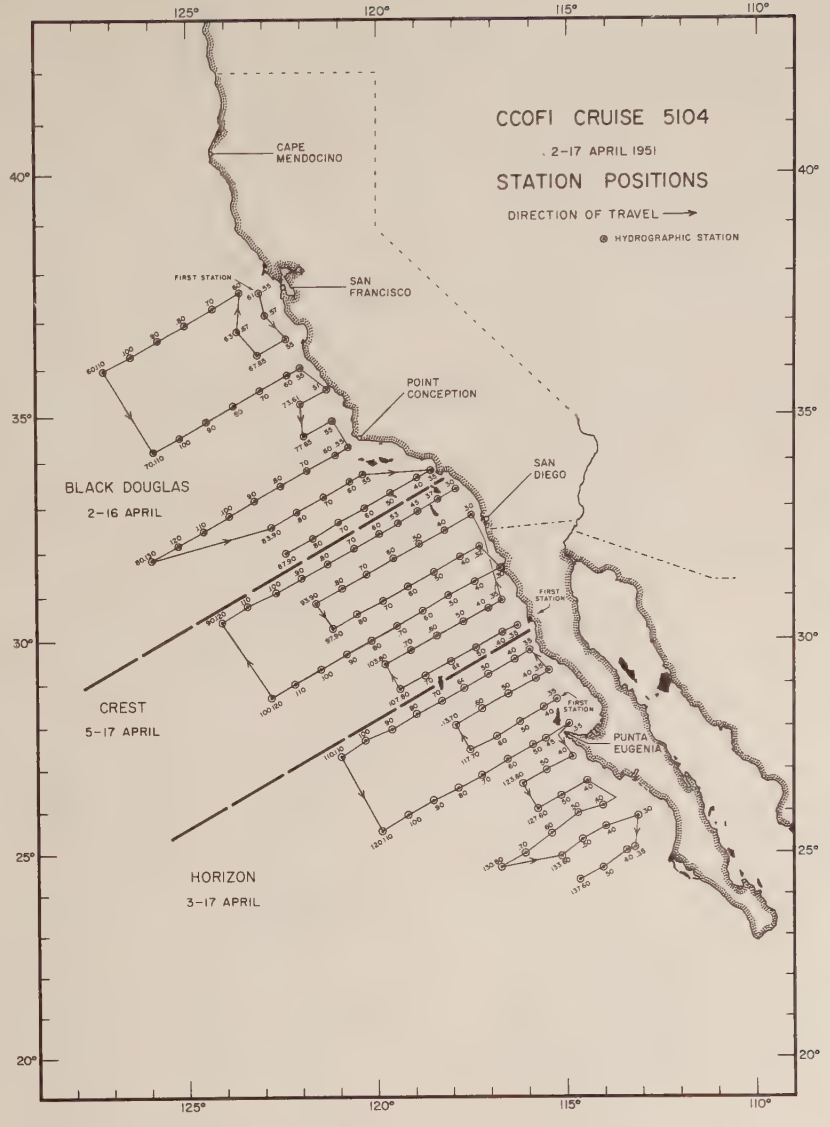

CHART 5. Station positions, CCOFI, Cruise 5104

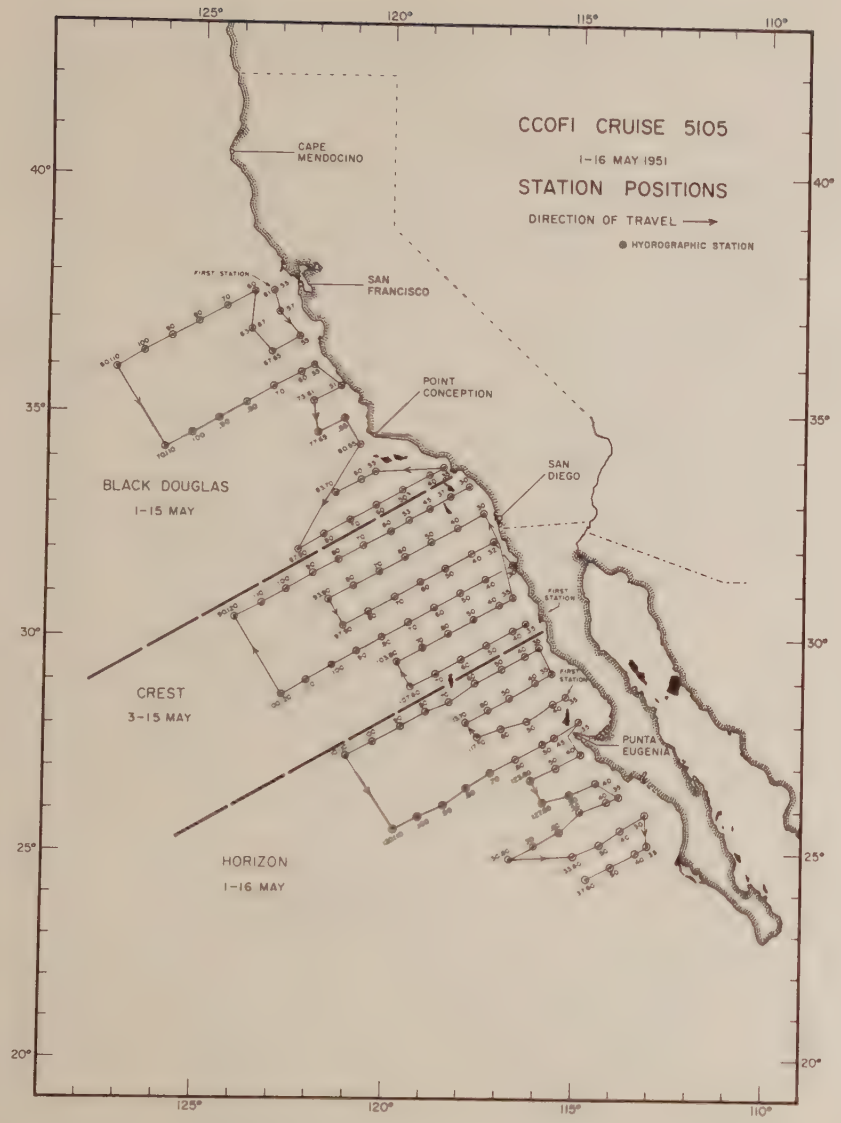

CHART 6. Station positions, CCOFI, Cruise 5105

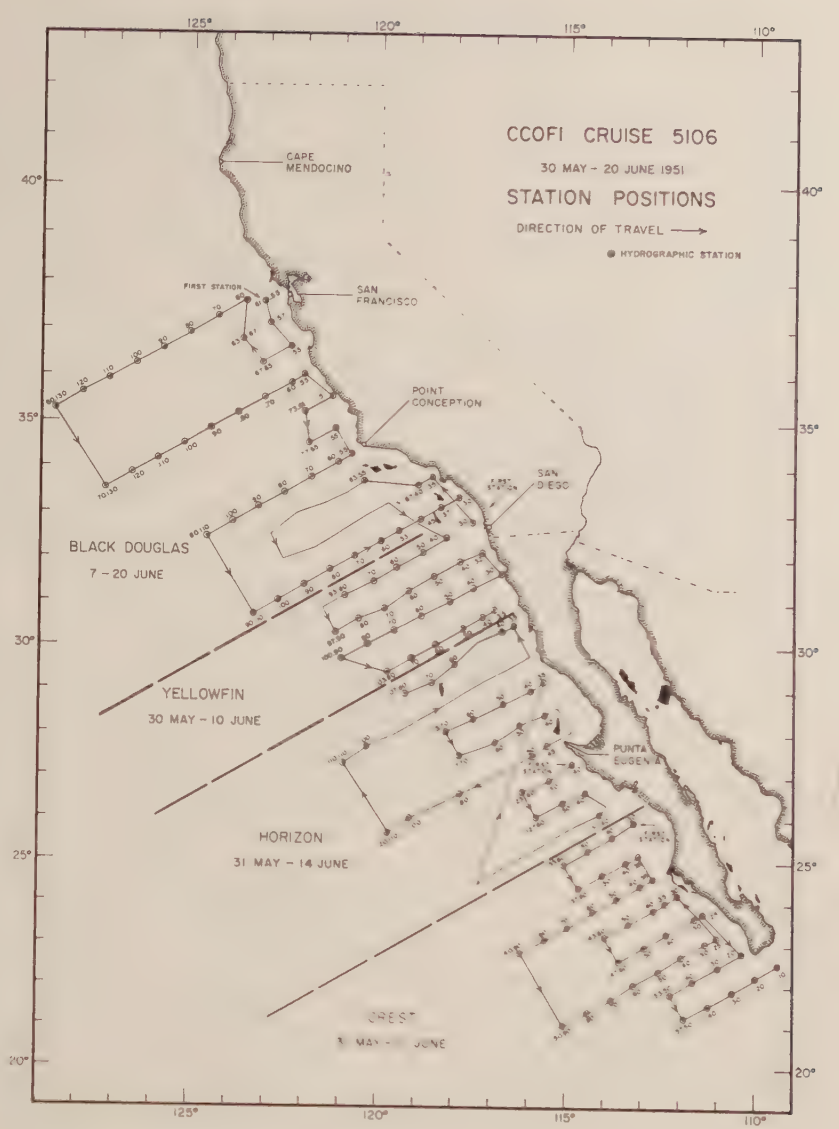

CHART 7. Station positions, CCOFI, Cruise 5106

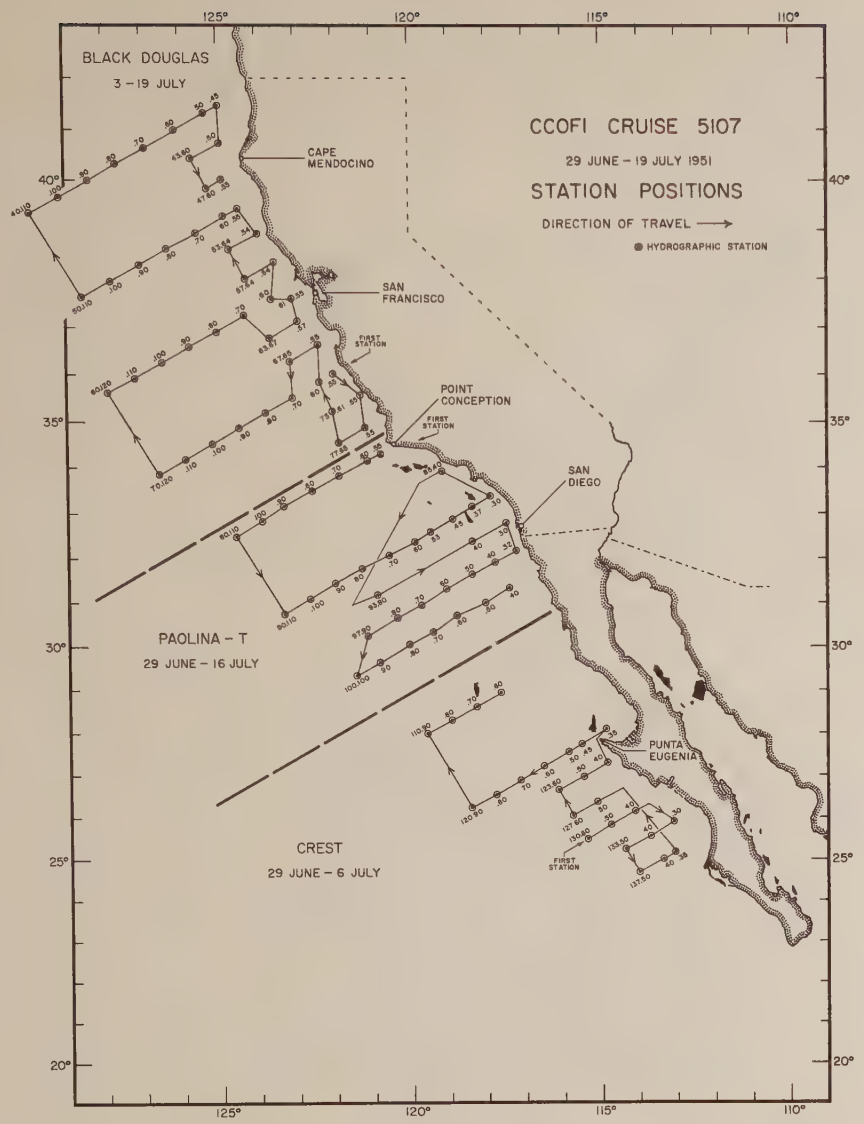

CHART 8. Station positions, CCOFI, Cruise 5107

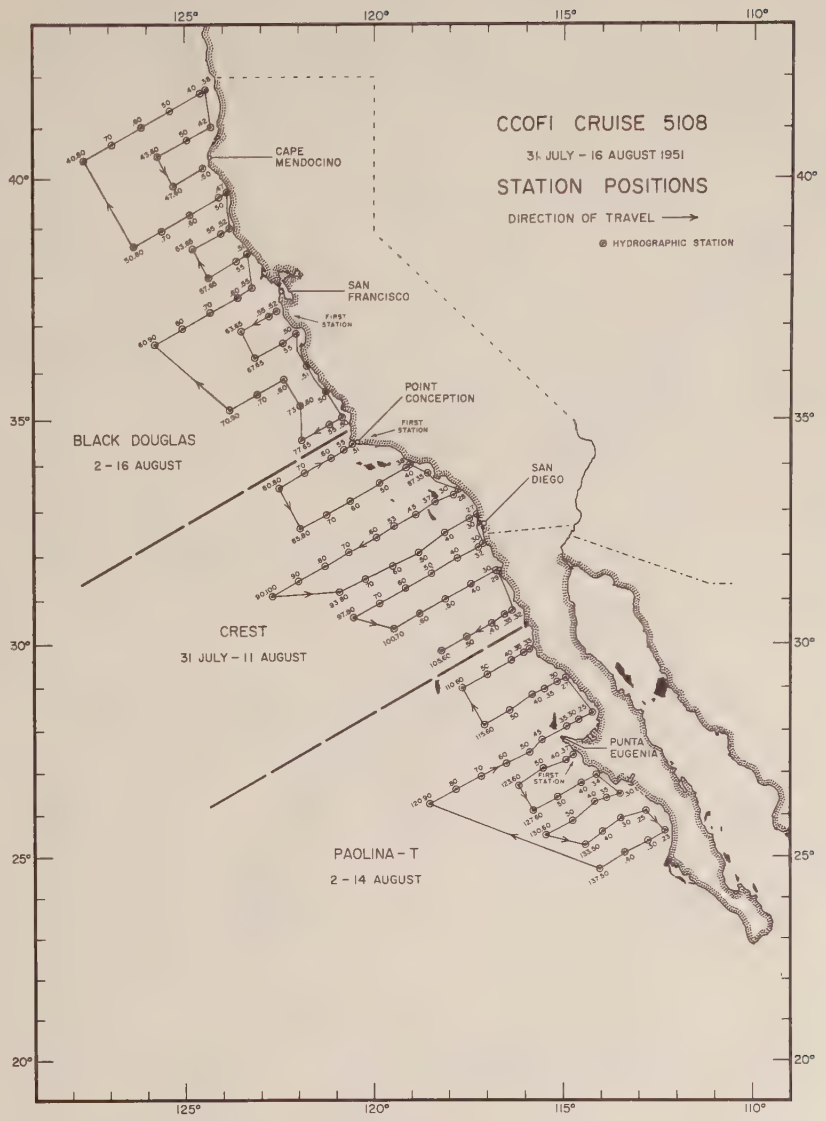

CHART 9. Station positions, CCOFI, Cruise 5108

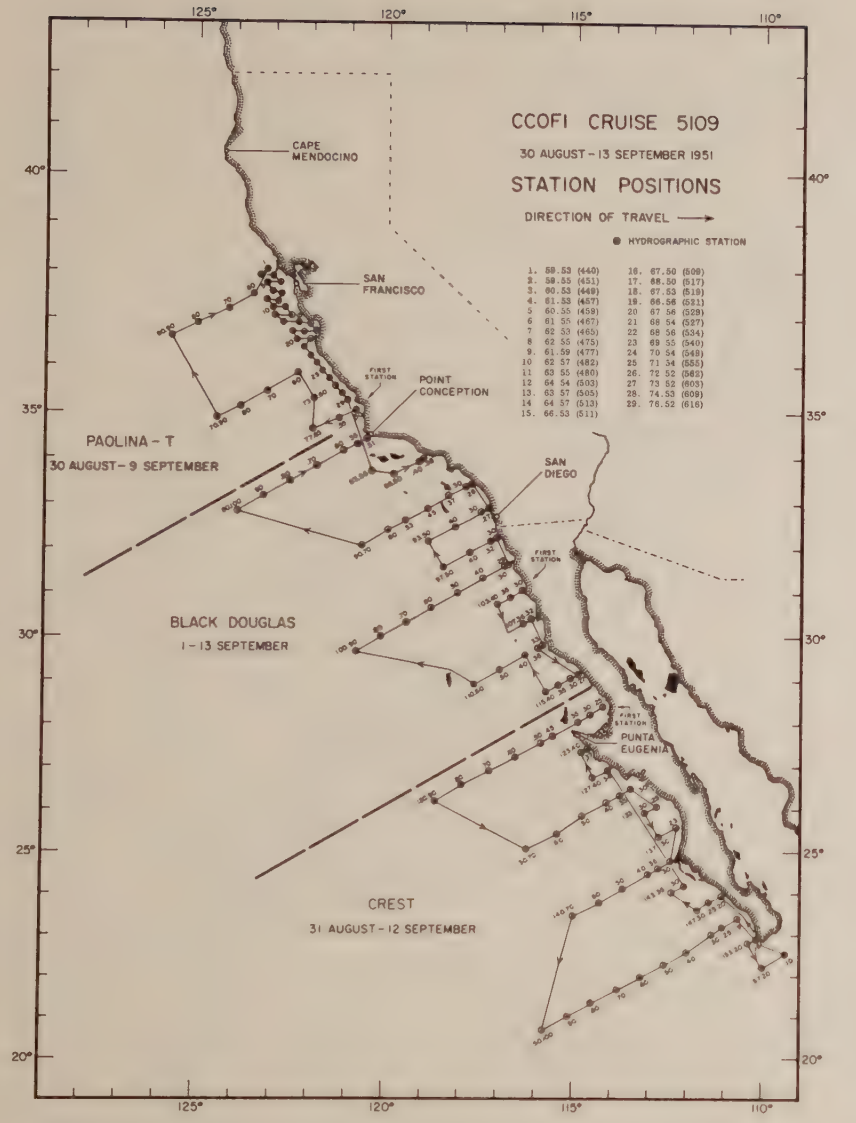

CHART 10. Station positions, CCOFI, Cruise 5109

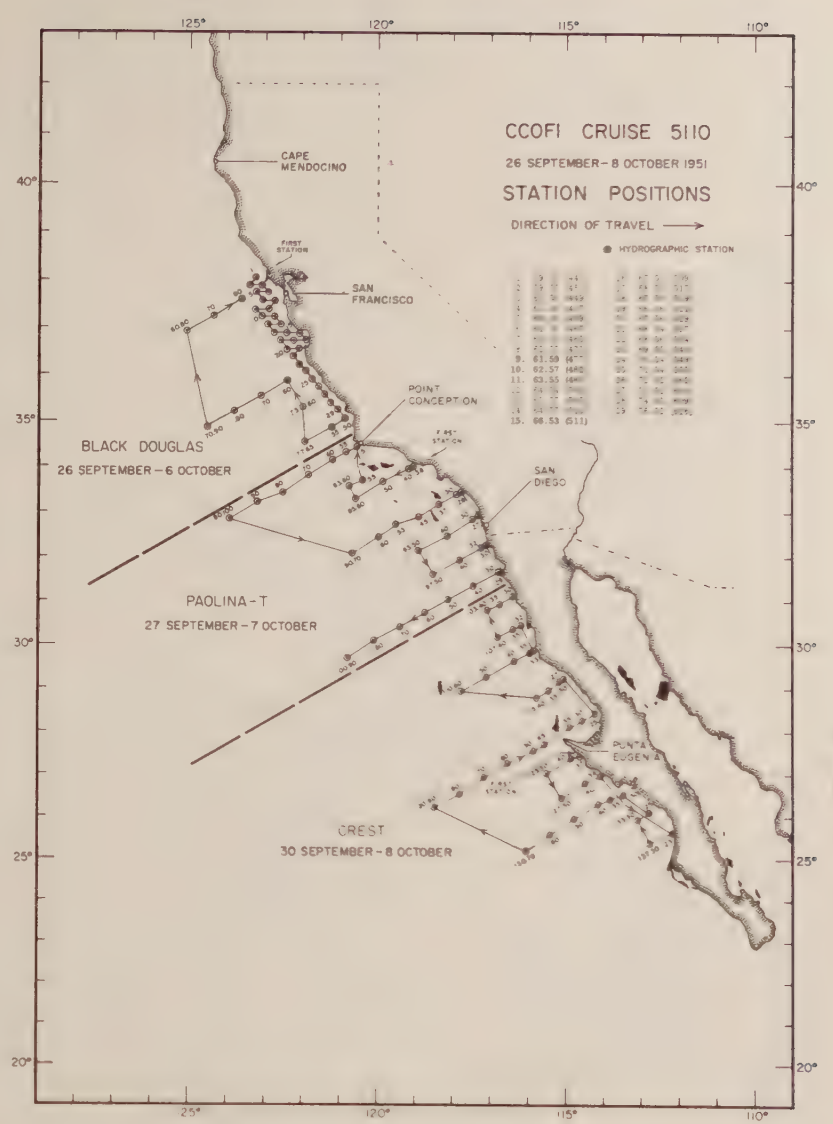

CHART 11. Station positions, CCOFI, Cruise 5110

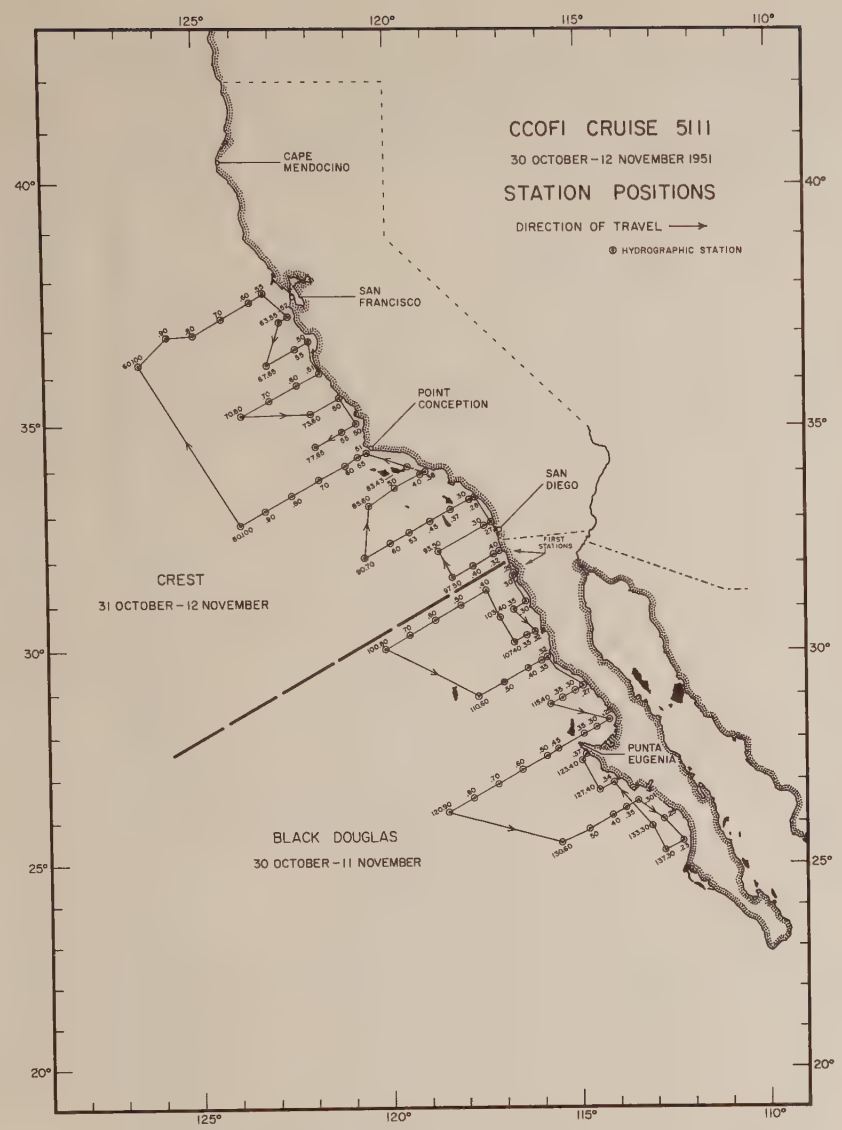

CHART 12. Station positions, CCOFI, Cruise 5111

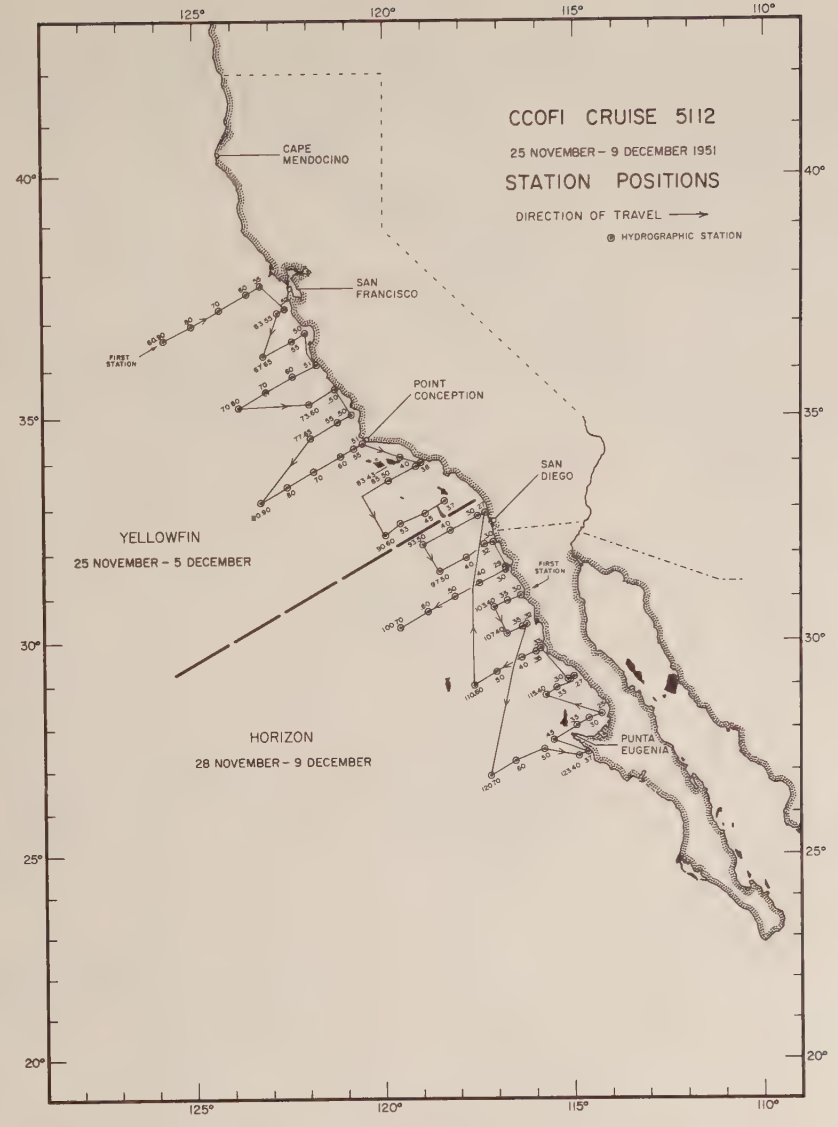

CHART 13. Station positions, CCOFI, Cruise 5112

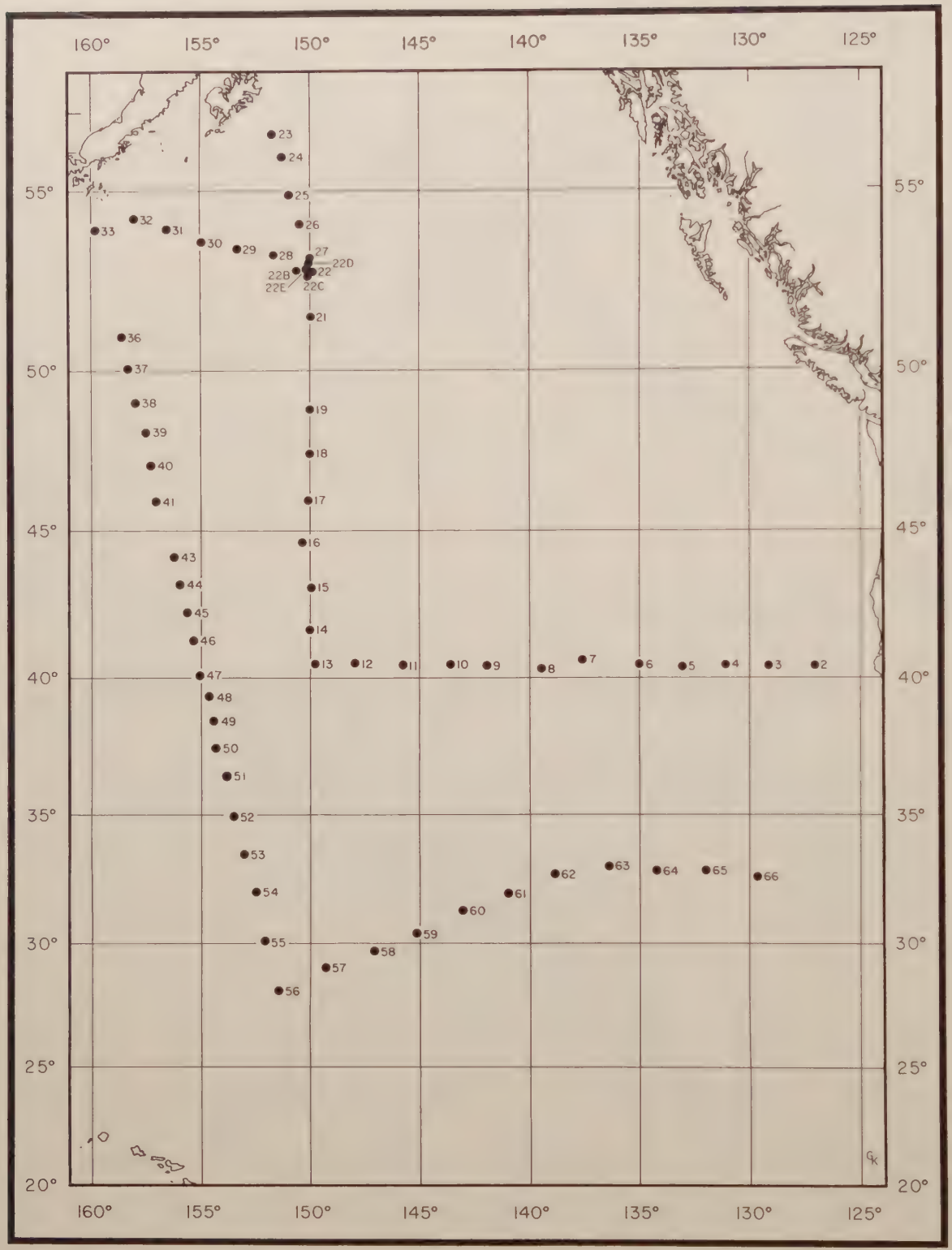

CHART 14. Station positions, Scripps Institution of Oceanography, RV Horizon on Expedition Northern Holiday

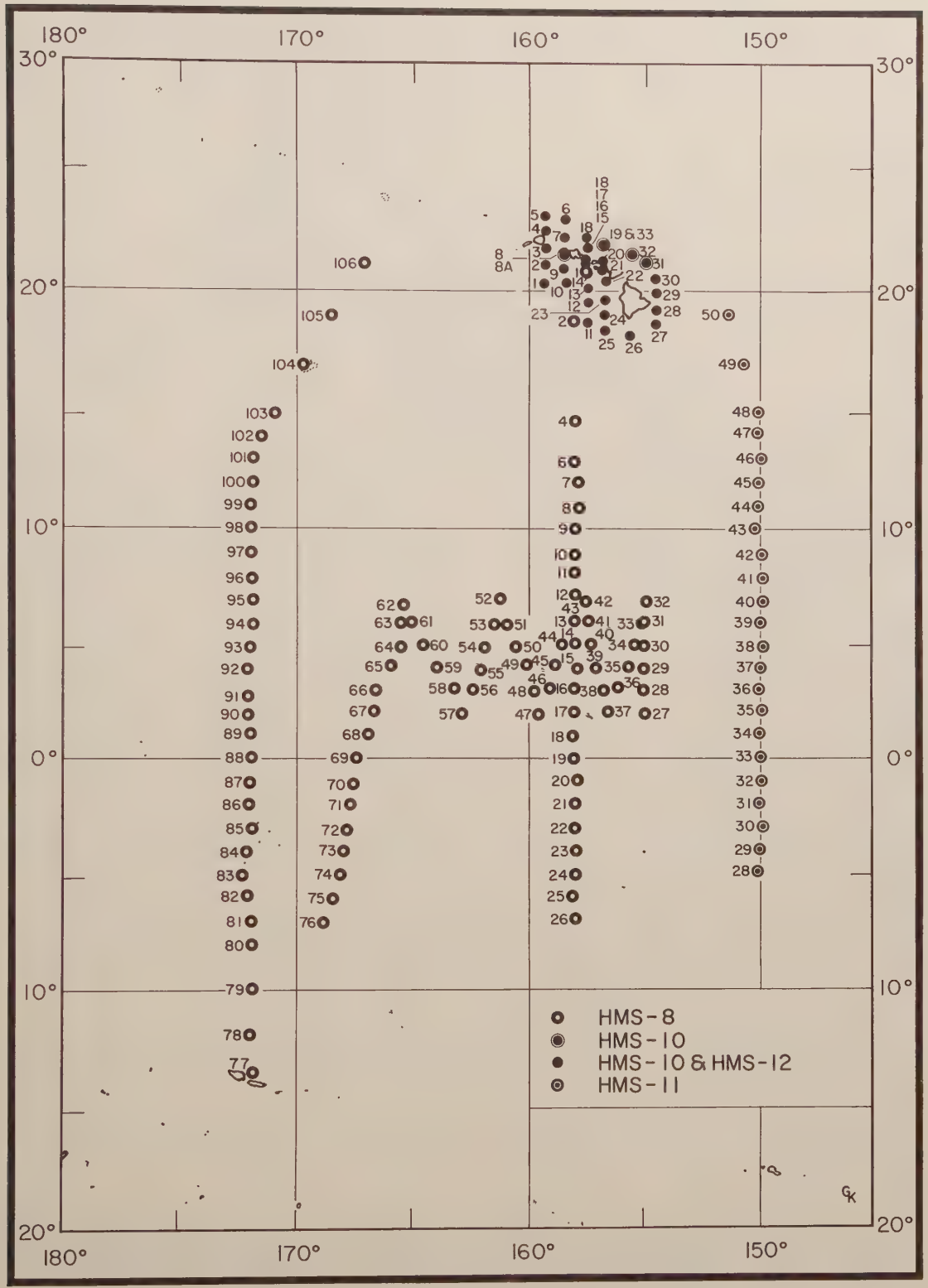

CHART 15. Station positions, Bureau of Commercial Fisheries, Honolulu, Cruises 8, 10, 11 and 12 of the RV Hugh M. Smith

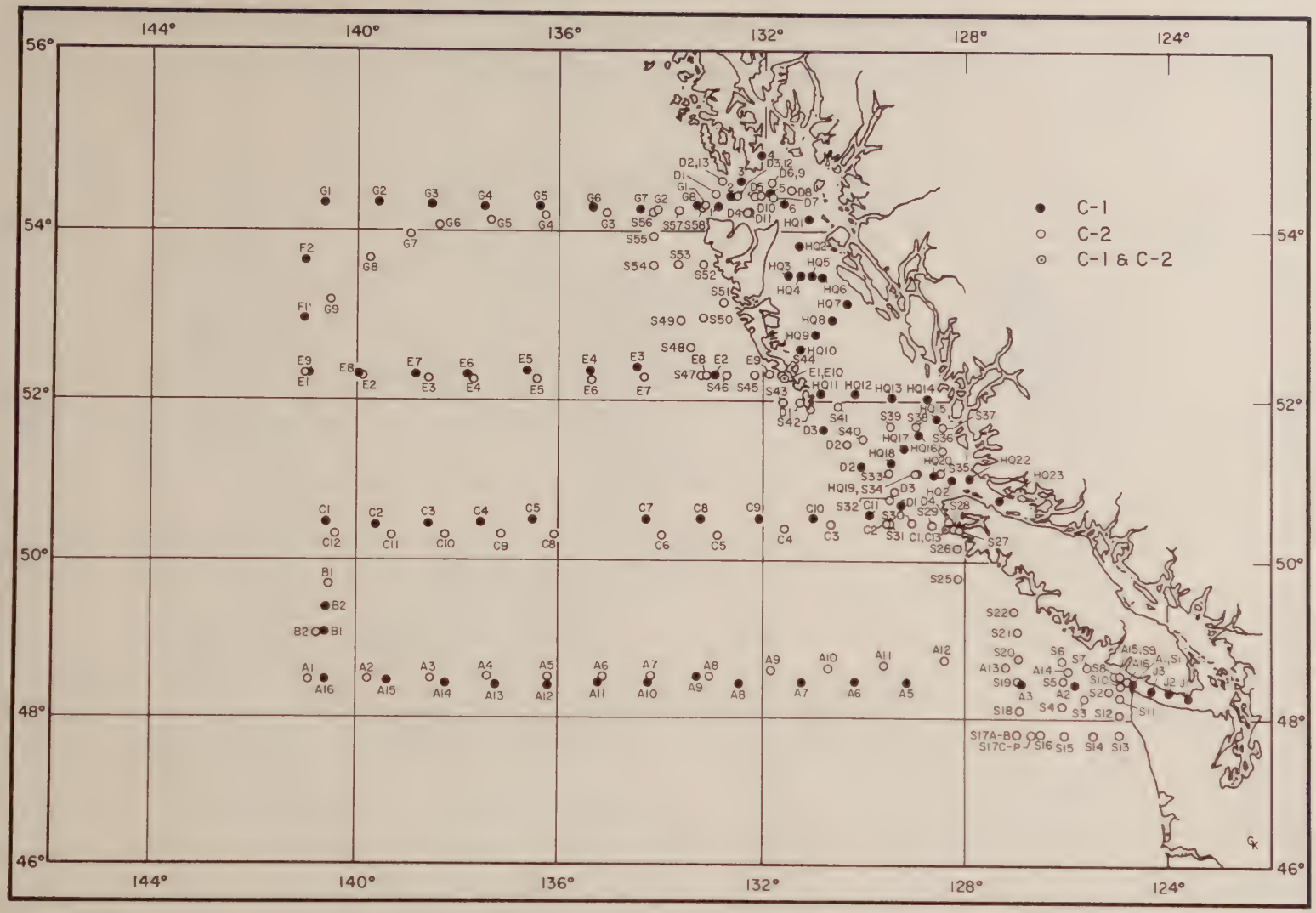

CHART 16. Station positions, Pacific Oceanographic Group, Cruises C-1 and C-2 of HMCS Cedarwood

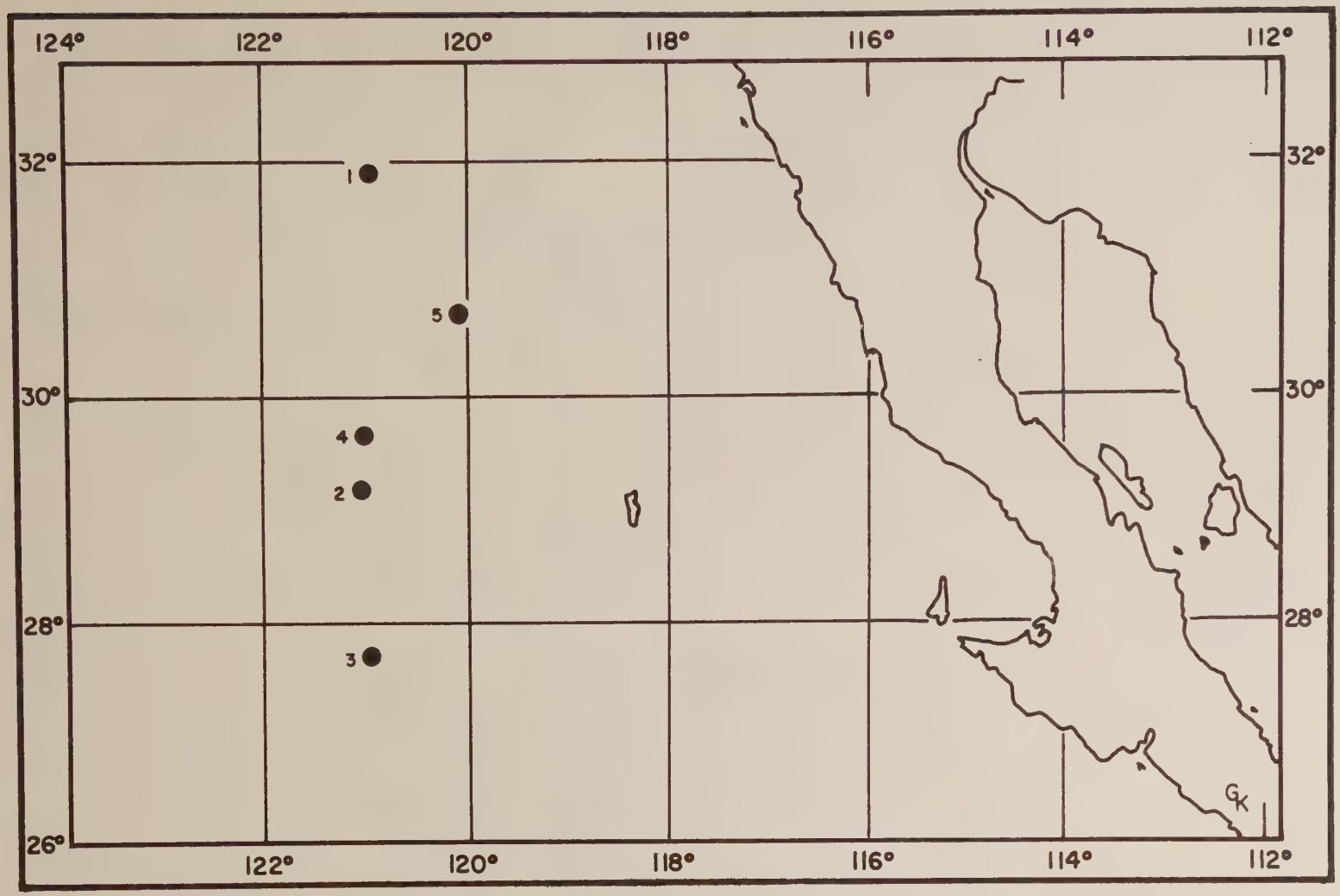

CHART 17. Station positions, U. S. Navy Electronics Laboratory, USS Marysville

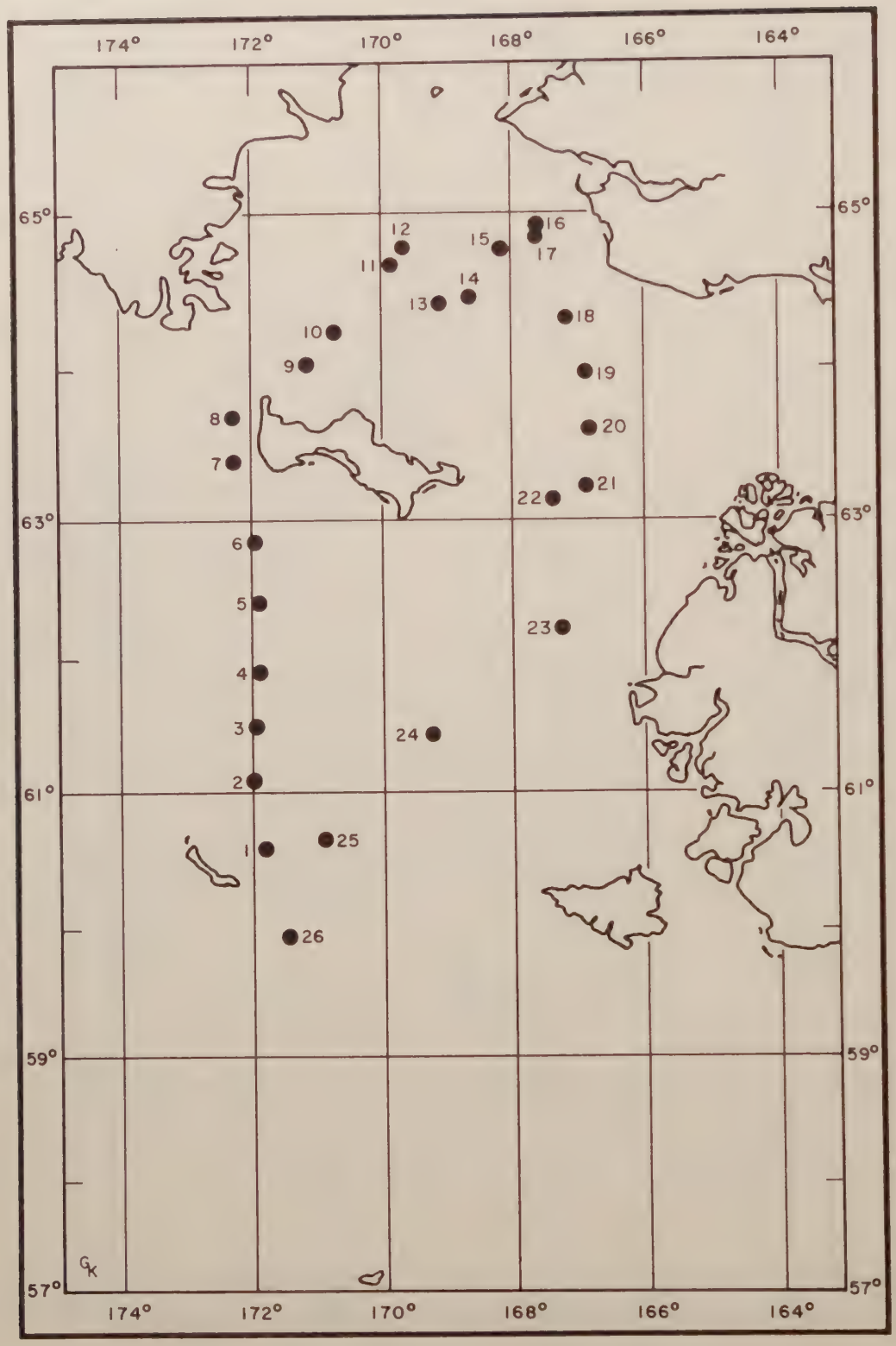

CHART 18. Station positions, U. S. Naval Oceanographic Office, U. S. Navy Electronics Laboratory, University of Washington and Scripps Institution of Oceanography, Cruise 2 of the USS Burton Island

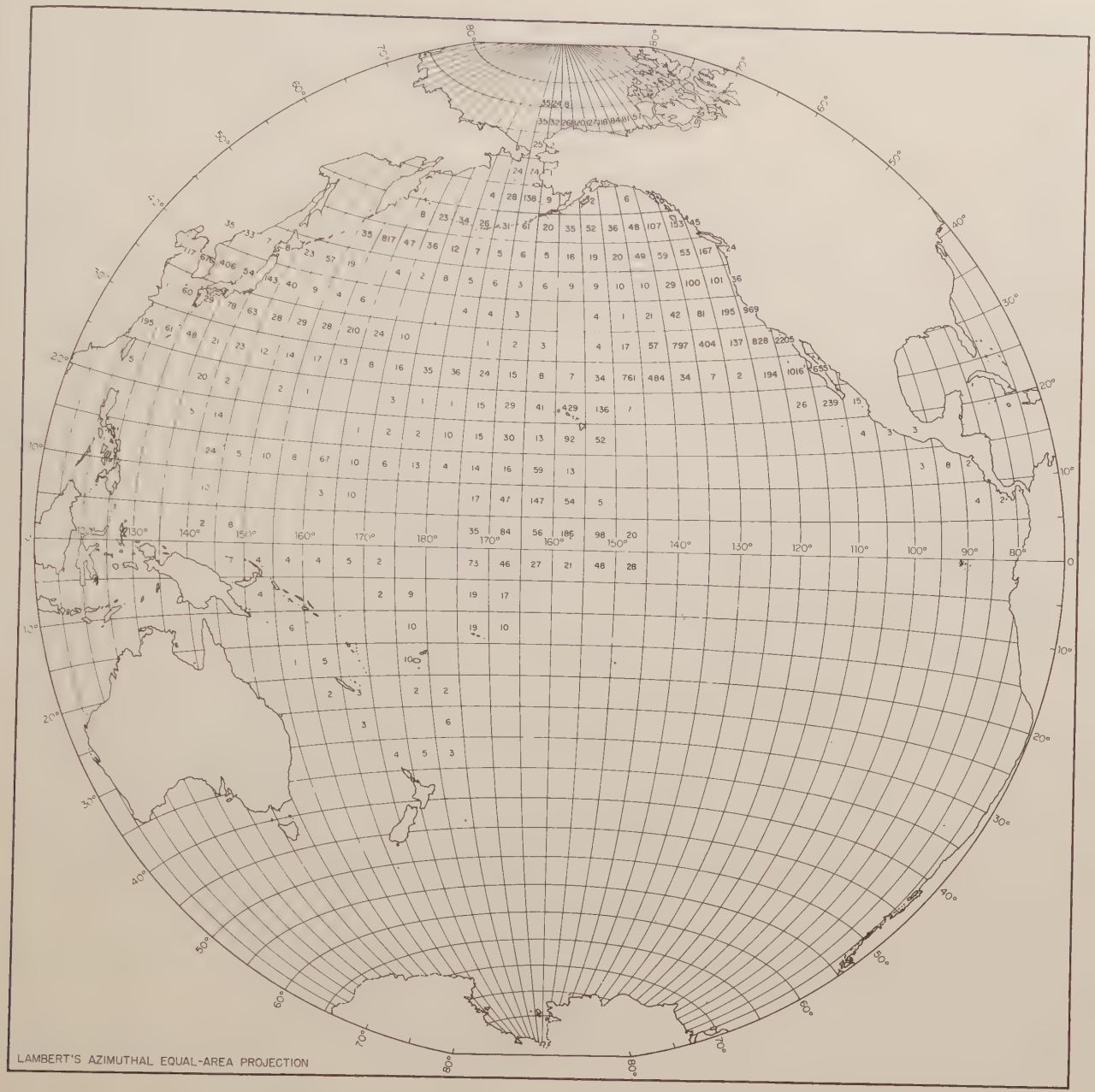

CHART 19. Bathythermograph observations, North and South Pacific, 1951; total, 18,085

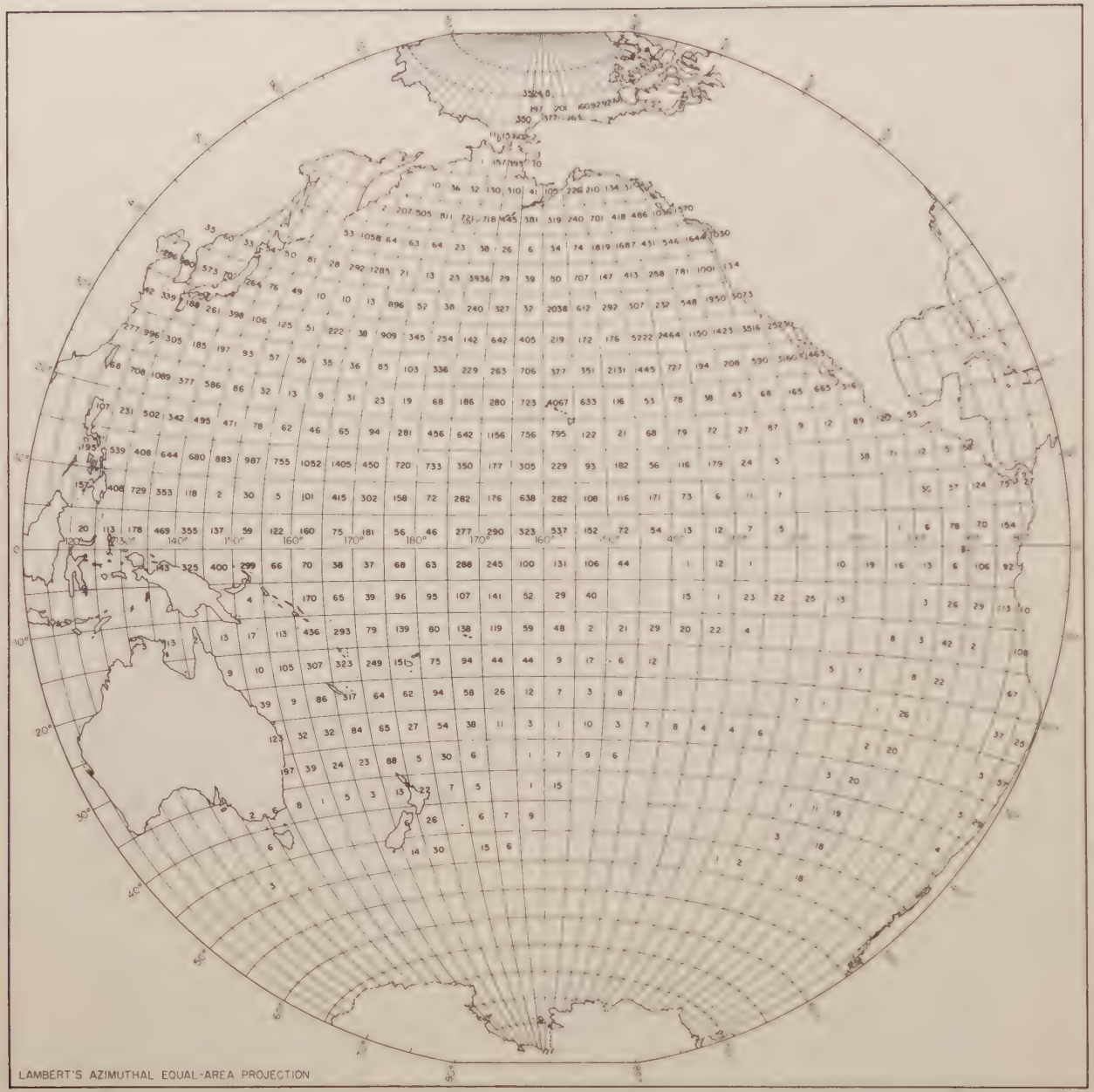

CHART 20. Bathythermograph observations, North and South Pacific, 1941–1951; total, 150,553

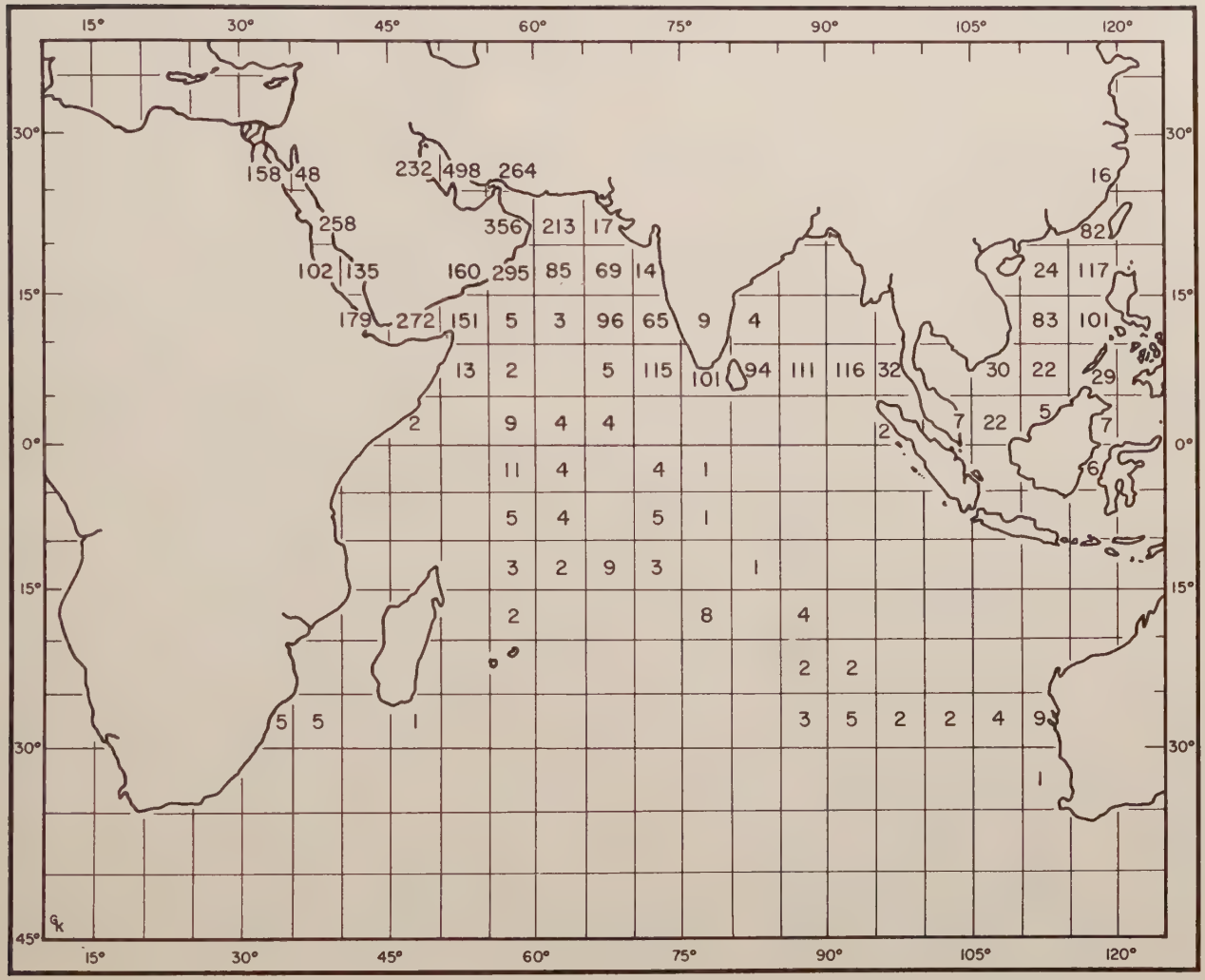

CHART 21. Bathythermograph observations, Indian Ocean, 1941–1951; total, 4,957

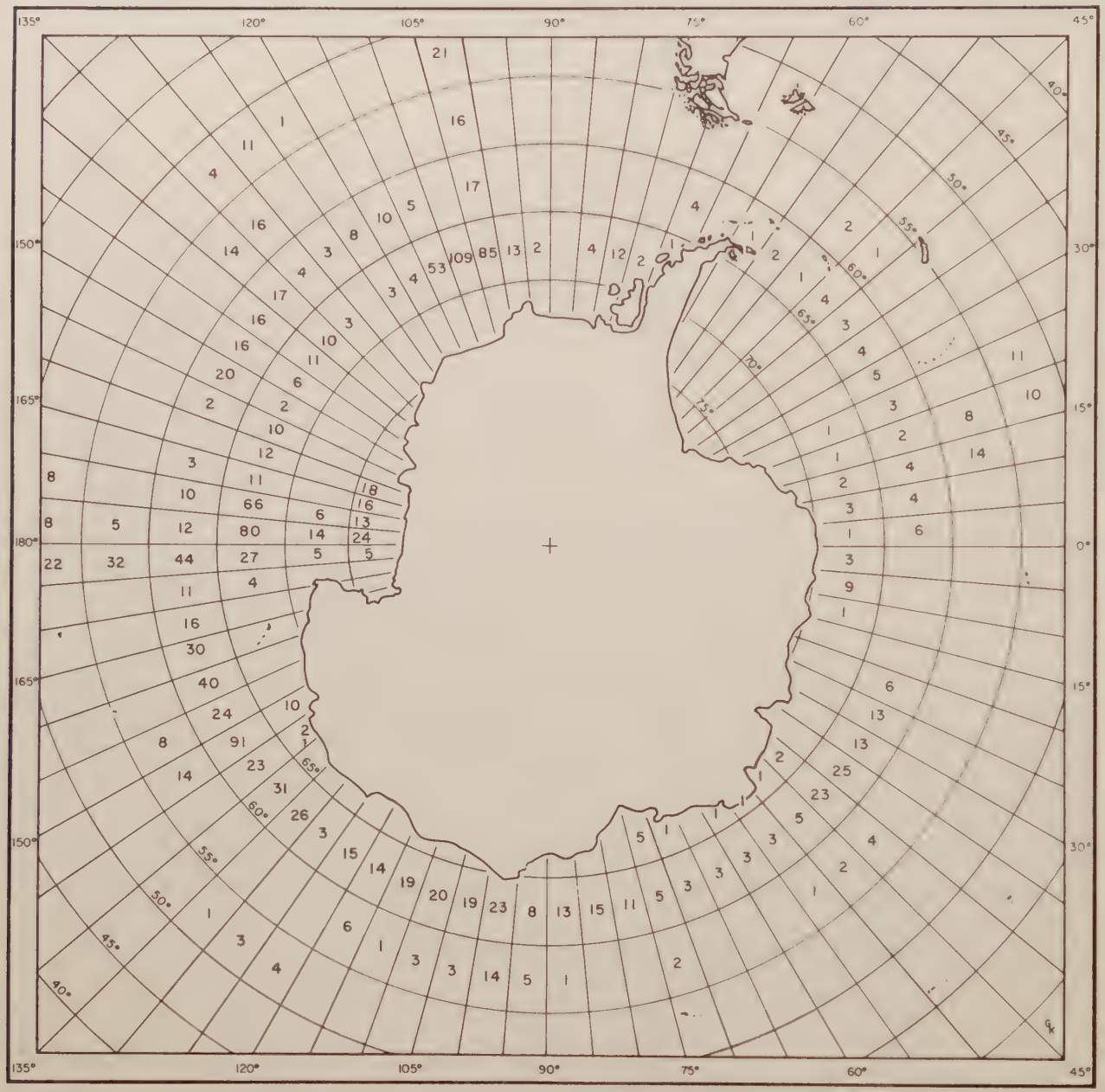

CHART 22. Bathythermograph observations, Antarctic Ocean, 1941-1951; total, 2,142

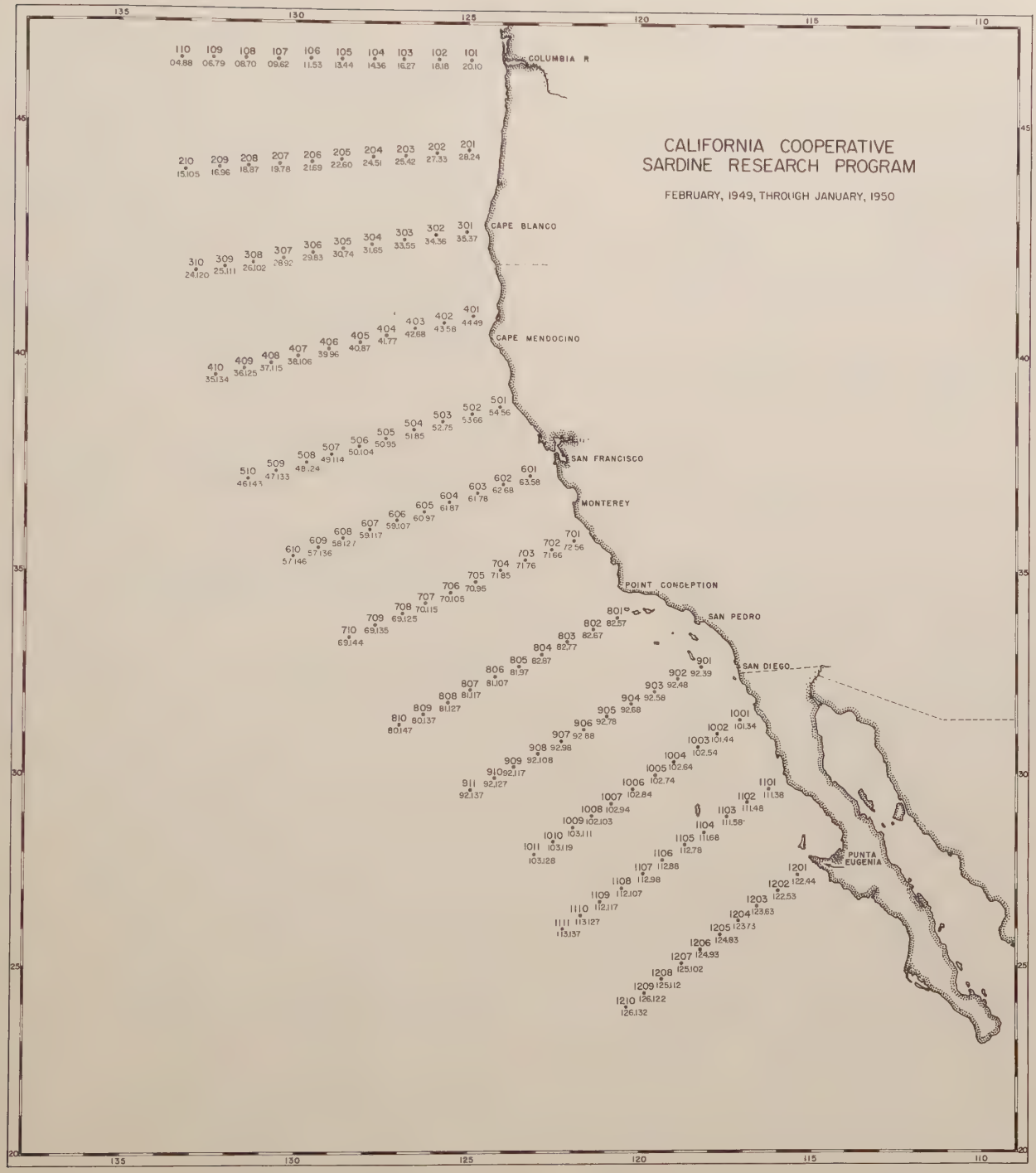

CHART 23. Station plan of the California Cooperative Oceanic Fisheries Investigations (formerly California Cooperative Sardine Research Program) from February, 1949, to January, 1950, inclusive, with equivalent numbers according to present station numbering system

Explanation of Tables

SIDE RUNNING HEADS

Cruise-identifying information is shown in the margin near the top of the page. The first line is an abbreviation of the name of the organization responsible for the data. The second and third lines give the cruise identification. In the case of data collected on the California Cooperative Oceanic Fisheries Investigations research program, for example, CCOFI 5101 signifies the January cruise of 1951.

Individual station numbers are given in the margin opposite the station data. Raised numbers in the CCOFI numbers indicate a position between lines or between stations of the standard station pattern. Station locations are shown in the appropriate station position charts.

HEADINGS OF GROUPS OF COLUMNS

OBSERVED: Corrected data at accepted depths of observation.

INTERPOLATED: Data at standard depths, interpolated from smooth distribution curves or by machine interpolation programs (see Notes on Particular Cruises). The standard depths are those selected by the agencies.

COMPUTED: The results of computations based, in general, on interpolated values.

COLUMN HEADINGS

Z — Depth in meters at which observation was made or an interpolated value obtained.

T — Temperature of water in degrees centigrade at observed or interpolated depths.

S — Salinity of water in grams per kilogram (‰) at observed or interpolated depths.

O_2 — Concentration of dissolved oxygen in milliliters per liter (ml/L) at observed or interpolated depths.

PO_4-P — Concentration of dissolved inorganic phosphorus in microgram atoms per liter (μg at/L) or micromoles per liter at observed depths.

σ_t — Sigma-t in grams per liter (g/L) at observed or interpolated depths. Sigma-t can be defined

$$\sigma_t = 1000\ (\rho_{ST0} - 1)$$

where ρ_{ST0} is the density, in grams per milliliter, of water of salinity, S, temperature, T, and at standard atmospheric pressure. Density is expressed in these units to be consistent with the tables used for the computations.

δ — Specific volume anomaly, in centiliters per ton (cl/ton), although most of the column headings state $10^{-5}cm^3/g$. The difference between the two units is negligible in these data (Pollak, 1961), but the correct units are centiliters per ton (or $10^{-5}ml/g$). Specific volume anomaly is defined as the difference between the specific volume of the water at a specified depth and the specific volume of a standard water with salinity of 35‰ and temperature of 0°C at the same depth. Specific volume anomaly is expressed in these units to be consistent with the tables used for the computations.

δ_T — Thermosteric anomaly, the pressure-independent part of the specific volume anomaly. Specific volume anomaly is defined as

$$\delta = \alpha_{stp} - \alpha_{35,0,p}$$

and is computed as

$$\delta = \Delta_{st} + \delta_{sp} + \delta_{tp}$$

The quantity Δ_{st} has been discussed by Sverdrup, Johnson and Fleming (1946, p. 58) and approximately represents potential specific volume anomaly. It is used here with the name (thermosteric anomaly), symbol (δ_T) and unit (centiliter per ton) suggested by Montgomery and Wooster (1954) although most of the column headings state $10^{-5}cm^3/g$. The difference between the two units is negligible in these data (Pollak, 1961), but the correct units are centiliters per ton.

ΔD — Geopotential anomaly, in dynamic meters (dynamic height), of the layer of water between the surface and the designated standard pressure. Geopotential anomaly is the difference between the geopotential thickness of the observed layer and the geopotential thickness of a layer bounded by the same pressures but having standard temperature, 0°C, and salinity, 35‰. The tabulated anomaly is determined from an approximation of the integral

$$\Delta D = \int_0^{p_z} \delta\, dp$$

where $\underline{p}$ is pressure in decibars (assumed equal to depth in meters) and subscript $\underline{z}$ denotes the value at the bottom of the layer under consideration. Since geopotential thickness is the product of geometrical thickness and the acceleration of gravity, a dynamic meter is equal to 10^5 ergs per gram and is the change in geopotential over a vertical distance of approximately 1.02 meter.

SUPPLEMENTARY STATION INFORMATION

Supplementary information about each station is to be found just above the tabulated data. This information includes name of ship, geographical location of station, date and time of observation, depth of water, a description of surface weather and sea state, wind direction and force, and wire angle. When there is more than one cast on a station, messenger times and wire angles are given for the casts in the order of increasing depth.

NOTES ON THE TABULATION OF DATA

1. Observed temperatures obtained by thermograph, bucket thermometer or bathythermograph are reported only to tenths of a degree. Temperatures by reversing thermometer are reported to hundredths of a degree.

2. Missing observed values are indicated by a hyphen (-).

3. Extrapolated values and values interpolated between remote observations are entered within parentheses.

4. Observed data from different casts are separated by a blank line.

5. The following notations have been used where appropriate.

For premature or delayed closure of water bottle and reversal of thermometers:

p pretrip or posttrip

For values which are not used in interpolation because they seem to be in error:

r rejected value

u uncertain value

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

N. B. SCOFIELD; January 29, 1951; 1810, 1845 GCT; 37°37'N, 123°37'W; sounding, 1738 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 20°, 20°. 60.60

0	10.80	6.39	0	10.80	6.39
9	10.90	6.35	10	10.90	6.32
23	12.52	4.21	20	12.52	4.20
47	10.97	5.36	30	12.47	4.23
70	9.66	4.68	50	10.65	5.35
93	9.54	3.78	75	9.62	4.43
			100	9.45	3.62
141	8.74	2.95	150	8.60	2.84
182	8.19	2.40	200	7.97	2.22
264	7.30	1.76	250	7.43	1.85
350	6.80	1.02	300	7.09	1.43
434	6.03	0.89	400	6.35	0.91
521	5.38	0.58	500	5.52	0.68
692	4.75	0.37	600	5.02	0.43
870	4.17	0.40	700	4.73	0.38
1069	3.49	0.72	800	4.45	0.38
			1000	3.68	0.60

N. B. SCOFIELD; January 29, 1951; 1222 GCT; 37°37'N, 123°07.5'W; sounding, 450 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 17°. 61.55

0	10.91	6.01	0	10.91	6.01
10	12.32	5.99	10	12.32	5.99
24	11.84	5.96	20	12.33	5.98
48	9.46	4.84	30	10.80	5.88
71	9.24	4.32	50	9.43	4.77
95	8.62	3.89	75	9.21	4.26
146	8.34	2.75	100	8.56	3.81
193	8.13	2.09	150	8.32	2.66
239	7.91	1.73	200	8.12	2.01
284	7.51	1.53	250	7.83	1.68
381	6.70	1.20	300	7.37	1.48
473	6.12	0.79	400	6.58	1.12
572	5.52	0.48	500	5.96	0.68
668	5.00	0.37	600	5.36	0.43
771	4.57	0.34	700	4.85	0.35

N. B. SCOFIELD; January 29, 1951; 0715 GCT; 37°12'N, 123°00'W; sounding, 260 fm; wind, 330°, force 3; weather, intermittent light drizzle; sea, confused; wire angle, 00°. 63.57

0	13.42	6.01	0	13.42	6.01
10	13.40	5.99	10	13.40	5.99
25	13.42	5.99	20	13.41	5.99
50	11.70	5.70	30	13.43	5.96
74	9.08	5.10	50	11.70	5.70
99	8.70	3.88	75	9.10	5.00
152	8.32	3.80	100	8.70	3.88
199	7.61	2.50	150	8.34	3.82
247	7.02	2.40	200	7.60	2.50
295	7.14	1.40	250	7.02	2.40
347	6.64	1.31	300	7.10	1.38
397	6.40	0.99	400	(6.40)	(0.99)

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

63.67

N. B. SCOFIELD; January 29, 1951; 0046 GCT; 36°49'N, 123°41'W; sounding, missing; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 05°.

0	13.40	5.81	0	13.40	5.81
10	13.42	5.48	10	13.42	5.48
25	13.39	5.75	20	13.40	5.68
50	12.20	5.34	30	13.38	5.72
74	9.64	4.48	50	12.20	5.34
99	8.96	4.01	75	9.63	4.47
151	8.03	2.95	100	8.93	3.98
200	7.61	1.84	150	8.05	2.99
295	6.54	1.65	200	7.61	1.84
395	5.92	0.84	250	7.06	1.75
490	5.54	0.55	300	6.50	1.63
591	5.13	0.34	400	5.90	0.82
787	4.42	0.36	500	5.50	0.52
981	3.76	0.45	600	5.09	0.35
1186	3.32	0.69	700	4.74	0.35
			800	4.38	0.36
			1000	3.70	0.47

67.55

N. B. SCOFIELD; January 28, 1951; 1057 GCT; 36°39'N, 122°26'W; sounding, missing; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 16°.

0	13.93	5.76	0	13.93	5.76
10	13.91	5.61	10	13.91	5.61
24	13.94	5.70	20	13.93	5.65
48	12.66	5.66	30	13.95	5.73
72	9.81	5.31	50	12.25	5.64
95	9.69	4.87	75	9.65	5.25
147	9.01	2.77	100	9.73	4.73
192	8.51	2.49	150	8.98	2.75
282	7.78	1.61	200	8.43	2.43
376	6.94	1.08	250	8.02	1.98
466	6.26	0.75	300	7.65	1.48
562	5.74	0.44	400	6.74	0.99
751	4.82	0.44	500	6.08	0.64
941	4.06	0.51	600	5.52	0.44
1143	3.52	0.61	700	5.04	0.44
			800	4.63	0.45
			1000	3.86	0.53

67.65

N. B. SCOFIELD; January 28, 1951; 1744 GCT; 36°15'N, 123°14'W; sounding, 1812 fm; wind, 310°, force 1; weather, overcast; sea, rough; wire angle, 03°.

1	14.22	5.30	0	(14.22)	(5.30)
10	14.18	5.48	10	14.18	5.48
25	14.20	5.63	20	14.20	5.60
51	14.18	5.53	30	14.20	5.62
75	12.50	5.40	50	14.19	5.53
97	9.98	5.46	75	12.50	5.40
149	8.86	3.87	100	9.88	5.44
197	8.22	3.40	150	8.85	3.86
290	7.12	2.76	200	8.20	3.38
388	6.10	1.43	250	7.59	3.02
483	5.76	0.66	300	7.00	2.68
582	5.28	0.38	400	6.03	1.30
777	4.57	0.49	500	5.70	0.58
972	3.93	0.52	600	5.20	0.38
1172	3.35	0.67	700	4.83	0.43
			800	4.50	0.50
			1000	3.83	0.53

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

70.55

N. B. SCOFIELD; January 28, 1951; 0407 GCT; 36°03'N, 122°02'W; sounding, 800 fm; wind, 320°, force 1; weather, overcast; sea, rough; wire angle, 15°.

0	11.63	6.27	0	11.63	6.27
9	11.30	6.18	10	11.30	6.17
24	10.76	5.72	20	11.30	5.85
47	9.69	4.18	30	10.30	5.36
72	9.38	3.27	50	9.65	3.92
94	8.91	3.28	75	9.34	3.27
146	8.56	2.69	100	8.84	3.25
190	8.22	2.08	150	8.53	2.65
280	7.40	1.61	200	8.15	2.02
379	6.58	0.95	250	7.70	1.76
471	6.09	0.69	300	7.23	1.48
569	5.50	0.49	400	6.46	0.88
761	4.60	0.44	500	5.92	0.63
952	3.98	0.62	600	5.33	0.49
1156	3.42	0.78	700	4.84	0.45
			800	4.46	0.47
			1000	3.83	0.65

70.60

N. B. SCOFIELD; January 27, 1951; 2332 GCT; 35°53'N, 122°23'W; sounding, missing; wind, 290°, force 1; weather, moderate rain; sea, rough; wire angle, 09°.

0	11.45	6.17	0	11.45	6.17
10	11.24	6.09	10	11.24	6.09
25	11.16	6.07	20	11.18	6.08
54	10.10	4.92	30	11.12	6.07
79	9.58	3.32	50	10.20	5.50
108	9.14	2.81	75	9.65	3.50
161	8.51	2.35	100	9.25	2.94
214	8.04	1.92	150	8.64	2.44
318	7.18	1.19	200	8.15	2.03
427	5.89	0.85	250	7.73	1.67
531	5.53	0.50	300	7.32	1.33
635	5.06	0.33	400	6.22	0.93
842	4.27	0.38	500	5.62	0.62
1050	3.72	0.55	600	5.23	0.36
1254	3.24	0.65	700	4.76	0.35
			800	4.39	0.36
			1000	3.85	0.51

70.70

N. B. SCOFIELD; January 27, 1951; 1550 GCT; 35°28'N, 123°07'W; sounding, 2080 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 15°.

0	12.75	5.63	0	12.75	5.63
9	12.74	6.25	10	12.74	6.25
24	12.38	5.97	20	12.75	6.02
48	11.42	5.77	30	11.65	5.93
72	10.58	4.27	50	11.40	5.74
95	9.54	3.30	75	10.40	4.05
146	8.53	2.71	100	9.38	3.23
190	8.21	2.38	150	8.50	2.68
280	7.42	1.43	200	8.15	2.29
375	6.72	0.99	250	7.73	1.76
466	6.16	0.81	300	7.27	1.28
563	5.50	0.44	400	6.60	0.94
757	4.64	0.40	500	5.87	0.71
952	3.96	0.47	600	5.34	0.41
1156	3.48	0.76	700	4.89	0.40
			800	4.45	0.40
			1000	3.81	0.52

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

70.80

N. B. SCOFIELD; January 27, 1951; 0840, 0912 GCT; 35°10'N, 123°49'W; sounding, missing; wind, 320°, force 4; weather, light fog; sea, missing; wire angle, 38°, 38°.

0	14.05	5.73	0	14.05	5.73
8	14.04	5.56	10	14.05	5.56
20	14.10	5.78	20	14.10	5.78
42	12.58	5.63	30	14.10	5.77
59	10.28	5.38	50	11.07	5.44
76	-	5.63	75	9.52	5.62
			100	8.78	4.75
108	8.62	4.39	150	7.95	3.98
139	8.06	4.15	200	7.67	3.01
203	7.66	2.95	250	7.32	2.27
271	7.08	2.07	300	6.63	1.98
337	6.13	1.86	400	5.57	1.42
402	5.54	1.39	500	4.81	0.92
539	4.62	0.78			

70.90

N. B. SCOFIELD; January 27, 1951; 0127 GCT; 34°53'N, 124°30'W; sounding, missing; wind, 310°, force 4; weather, overcast; sea, confused; wire angle; 20°.

0	14.66	5.51	0	14.66	5.51
9	15.00	5.64	10	15.00	5.65
23	13.68	5.78	20	14.00	5.75
50	13.27	5.68	30	13.54	5.77
73	12.80	5.77	50	13.27	5.68
100	9.80	5.26	75	12.77	5.75
147	8.58	4.02	100	9.80	5.26
191	7.92	4.23	150	8.53	3.98
280	6.87	2.55	200	7.82	3.39
376	6.08	1.36	250	7.22	2.86
468	5.63	0.65	300	6.68	2.34
562	5.11	0.45	400	5.95	1.14
749	4.56	0.39	500	5.46	0.55
945	3.94	0.49	600	4.95	0.43
1142	3.44	0.71	700	4.68	0.40
			800	4.41	0.41
			1000	3.78	0.54

73.51

N. B. SCOFIELD; January 24, 1951; 1306 GCT; 35°35.5'N, 121°20'W; sounding, 160 fm; wind, 240°, force 1; weather, clear; sea, rough; wire angle, 04°.

0	11.34	6.17	0	11.34	6.17
10	10.96	5.78	10	10.96	5.78
25	10.70	4.71	20	10.80	5.20
50	10.16	4.05	30	10.60	4.55
74	9.70	3.18	50	10.16	4.05
99	9.30	2.98	75	9.68	3.17
153	8.68	2.30	100	9.28	2.97
201	8.18	1.86	150	8.72	2.35
250	8.01	1.69	200	8.21	1.88
			250	8.01	1.69

73.61

N. B. SCOFIELD; January 24, 1951; 1910 GCT; 35°18'N, 122°05'W; sounding, 1500 fm; wind, 270°, force 1; weather, clear; sea, rough; wire angle, 03°.

0	12.00	6.62	0	12.00	6.62
11	11.94	6.31	10	11.95	6.35
25	11.58	5.72	20	11.70	5.98
50	9.96	5.32	30	11.37	5.60
75	8.90	4.73	50	9.96	5.32
			75	8.90	4.73

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

77.55

N. B. SCOFIELD; January 24, 1951; 0615 GCT; 34°57'N, 121°20'W; sounding, 240 fm; wind, 360°, force 3; weather, clear; sea, very rough; wire angle, 05°.

0	13.18	5.96	0	13.18	5.96
10	13.17	5.59	10	13.17	5.59
25	13.18	5.90	20	13.18	5.85
50	12.56	5.69	30	13.13	5.89
74	10.66	4.58	50	12.56	5.69
98	9.76	4.06	75	10.65	4.53
151	8.94	2.78	100	9.76	4.02
193	8.53	2.26	150	8.96	2.79
235	8.02	1.87	200	8.47	2.18
295	7.77	1.54	250	7.96	1.78
348	7.31	1.38	300	7.74	1.52
397	6.84	0.83	400	(6.83)	(0.82)

77.65

N. B. SCOFIELD; January 25, 1951; 0137 GCT; 34°34'N, 121°55'W; sounding, 2080 fm; wind, 310°, force 1; weather, clear; sea, very rough; wire angle, 08°.

0	13.78	5.89	0	13.78	5.89
10	13.58	5.72	10	13.58	5.72
25	13.58	5.27	20	13.59	5.38
49	11.70	5.14	30	13.59	5.21
74	9.59	4.05	50	11.50	5.13
98	9.00	3.45	75	9.58	3.96
150	8.18	2.97	100	8.97	3.43
197	7.68	1.75	150	8.18	2.97
290	6.62	1.67	200	7.67	1.73
390	5.86	0.65	250	7.07	1.67
483	5.36	0.42	300	6.54	1.62
583	5.06	0.31	400	5.79	0.61
779	4.48	0.40	500	5.30	0.39
975	3.86	0.55	600	5.02	0.31
1181	3.38	0.54	700	4.73	0.34
			800	4.39	0.42
			1000	3.79	0.55

80.55

N. B. SCOFIELD; January 23, 1951; 2151 GCT; 34°19'N, 120°48'W; sounding, 400 fm; wind, 320°, force 6; weather, partly cloudy; sea, high; wire angle, 08°.

0	11.20	5.35	0	11.20	5.35
10	11.19	5.47	10	11.19	5.47
25	11.12	4.89	20	11.15	5.10
49	10.26	3.73	30	11.09	4.65
74	9.53	3.25	50	10.25	3.67
98	9.06	2.83	75	9.52	3.22
152	8.64	2.25	100	9.04	2.80
199	8.34	1.57	150	8.67	2.27
247	7.88	1.34	200	8.34	1.53
296	7.58	1.35	250	7.87	1.33
349	7.30	1.04	300	7.58	1.33
396	6.78	0.83	400	6.75	0.79
493	6.36	0.53	500	6.34	0.52
595	5.84	0.48	600	5.80	0.48
692	5.20	0.41	700	(5.17)	(0.41)

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

80.60

N. B. SCOFIELD; January 25, 1951; 0811 GCT; 34°09'N, 121°09'W; sounding, missing; wind, 270°, force 2; weather, clear; sea, rough; wire angle, 08°.

0	11.84	5.85	0	11.84	5.85
10	11.72	5.73	10	11.72	5.73
25	11.62	4.35	20	11.66	4.52
49	10.62	3.86	30	11.60	4.23
74	9.76	3.83	50	10.60	3.85
98	9.16	2.95	75	9.75	3.33
151	8.61	2.12	100	9.13	2.93
198	7.84	1.78	150	8.62	2.13
292	6.95	1.26	200	7.82	1.76
392	6.22	0.81	250	7.32	1.51
488	5.75	0.47	300	6.88	1.24
589	5.27	0.43	400	6.18	0.79
786	4.61	0.46	500	5.69	0.45
984	3.96	0.60	600	5.24	0.44
			700	4.91	0.45
			800	4.57	0.46
			1000	(3.91)	(0.62)

80.70

N. B. SCOFIELD; January 25, 1951; 1504 GCT; 33°47.5'N, 121°49'W; sounding, 2000 fm; wind, 310°, force 1; weather, overcast; sea, very rough; wire angle, 05°.

0	13.65	6.10	0	13.65	6.10
10	13.73	6.41	10	13.73	6.41
50	13.35	5.52	20	13.73	6.37
74	10.42	5.22	30	13.68	6.10
98	9.71	4.51	50	13.35	5.52
151	8.66	3.35	75	10.41	5.20
199	8.08	2.24	100	9.65	4.43
293	6.88	1.48	150	8.70	3.38
393	5.88	0.93	200	8.08	2.23
489	5.56	0.54	250	7.47	1.83
588	5.09	0.41	300	6.78	1.43
785	4.36	0.40	400	5.84	0.88
981	3.83	0.63	500	5.53	0.51
			600	5.05	0.41
			700	4.64	0.40
			800	4.32	0.41
			1000	(3.79)	(0.66)

80.80

N. B. SCOFIELD; January 25, 1951; 2119 GCT; 33°25'N, 122°30'W; sounding, 2400 fm; wind, 270°, force 3; weather, cloudy; sea, rough; wire angle, 01°.

0	15.10	5.62	0	15.10	5.62
10	14.96	5.81	10	14.96	5.81
25	14.84	5.77	20	14.87	5.80
49	14.34	5.45	30	14.81	5.70
74	12.64	5.42	50	14.32	5.45
99	10.38	5.15	75	12.50	5.42
152	9.70	4.56	100	10.36	5.14
182	8.58	3.67	150	9.75	4.57
289	7.02	1.82	200	8.25	3.20
396	5.88	1.03	250	7.52	2.28
493	5.61	0.55	300	6.88	1.73
592	4.99	0.36	400	5.86	1.00
791	4.16	0.34	500	5.57	0.53
986	3.80	0.65	600	4.93	0.36
1190	3.32	0.82	700	4.41	0.35
			800	4.15	0.35
			1000	3.77	0.67

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

N. B. SCOFIELD; January 26, 1951; 0508 GCT; 33°09'N, 123°13'W; sounding, 2400 fm; wind, 320°, force 3; weather, overcast; sea, missing; wire angle, 16°. 80.90

0	14.54	5.88	0	14.54	5.88
10	14.54	5.53	10	14.54	5.53
24	13.55	6.01	20	14.30	6.01
48	11.64	5.44	30	11.75	5.98
72	10.04	4.53	50	11.65	5.35
96	8.88	3.67	75	9.80	4.40
148	8.26	2.69	100	8.82	3.58
194	7.65	2.36	150	8.25	2.67
287	6.65	1.84	200	7.58	2.32
387	5.94	1.17	250	6.96	2.03
483	5.41	0.66	300	6.57	1.76
581	5.10	0.39	400	5.83	1.11
777	4.28	0.44	500	5.37	0.61
968	3.77	0.57	600	5.00	0.39
1175	3.30	0.73	700	4.56	0.39
			800	4.23	0.45
			1000	3.67	0.59

N. B. SCOFIELD; January 26, 1951; 0720 GCT;[a] 33°09'N, 123°13'W; sounding, 2400 fm; weather, overcast; sea, missing; wire angle, 18°. 80.90

678	4.66
702	4.58
725	4.49
749	4.36
773	4.29
797	4.25
821	4.20
846	4.10
870	4.04
894	3.97
919	3.92
943	3.84
968	3.78
993	3.82

N. B. SCOFIELD; January 22, 1951; 1259 GCT; 33°44'N, 120°24.5'W; sounding, 580 fm; wind, 300°, force 6; weather, cloudy; sea, very rough; wire angle, 35°. 83.55

0	12.26	5.64	0	12.26	5.64
8	12.26	5.53	10	12.27	5.40
20	12.25	4.96	20	12.25	4.96
41	12.14	5.24	30	12.21	5.08
61	11.94	5.34	50	12.06	5.32
82	9.80	4.44	75	10.45	4.87
124	9.35	3.17	100	9.57	3.69
160	8.80	2.88	150	8.97	2.93
196	8.38	2.38	200	8.34	2.32
233	7.86	2.01	250	7.63	1.86
311	7.12	1.43	300	7.17	1.50
385	6.74	0.76	400	6.65	0.62
470	6.23	0.46	500	6.10	0.46
556	5.86	0.43	600	5.59	0.40
653	5.28	0.37			

a) Test cast.

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

83.60

N. B. SCOFIELD; January 22, 1951; 0725 GCT; 33°34'N, 120°45'W; sounding, 1000 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°.

0	12.6	5.47	0	12.6	5.48
10	12.05	5.38	10	12.05	5.38
24	12.06	5.21	20	12.06	5.28
54	11.14	4.80	30	12.05	5.15
78	9.74	4.40	50	11.35	4.87
107	8.99	3.35	75	9.85	4.46
159	8.30	2.81	100	9.13	3.50
210	7.93	2.33	150	8.39	2.88
312	6.87	1.28	200	7.99	2.43
420	6.30	0.50	250	7.52	1.91
523	5.77	0.38	300	6.97	1.41
627	5.28	-	400	6.36	0.58
837	4.40	0.47	500	5.92	0.38
1041	3.78	0.59	600	5.40	0.38
1224	3.45	0.59	700	4.98	0.40
			800	4.55	0.45
			1000	3.87	0.56

83.70

N. B. SCOFIELD; January 22, 1951; 0019 GCT; 33°14'N, 121°27'W; sounding, missing; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 24°.

0	13.76	5.65	0	13.76	5.65
9	13.75	5.39	10	13.75	5.38
23	13.68	5.38	20	13.68	5.37
46	13.60	5.07	30	13.65	5.33
68	10.68	5.00	50	13.60	5.06
91	9.78	4.34	75	10.27	4.93
139	8.78	3.28	100	9.58	4.04
180	8.14	2.81	150	8.55	3.12
263	7.45	1.87	200	7.98	2.59
351	6.16	1.33	250	7.57	2.02
437	6.15	0.49	300	6.63	1.59
528	5.62	0.37	400	6.15	0.85
709	4.71	0.29	500	5.82	0.40
892	4.10	0.44	600	5.22	0.34
1088	3.63	0.63	700	4.75	0.29
			800	4.37	0.38
			1000	3.83	0.51

83.80

N. B. SCOFIELD; January 21, 1951; 1637 GCT; 33°00'N, 122°20'W; sounding, 2200 fm; wind, 020°, force 3; weather, partly cloudy; sea, very rough; wire angle, 12°.

0	14.78	5.23	0	14.78	5.23
10	14.76	5.35	10	14.76	5.35
24	14.58	5.09	20	14.61	5.15
48	14.60	5.28	30	14.57	5.10
73	13.60	5.28	50	14.57	5.27
97	11.14	4.97	75	13.30	5.26
149	9.37	3.83	100	10.97	4.93
196	8.67	3.02	150	9.35	3.80
289	7.51	2.32	200	8.61	2.98
386	6.62	2.01	250	7.96	2.58
478	6.04	1.02	300	7.39	2.28
575	5.48	0.41	400	6.53	1.92
768	4.54	-	500	5.92	0.79
959	3.84	-	600	5.34	
1161	3.45	0.75	700	4.84	
			800	4.41	
			1000	3.72	

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

N. B. SCOFIELD; January 21, 1951; 0923 GCT; 32°34.5'N, 122°48'W; sounding, missing; wind, 280°, force 2; weather, partly cloudy; sea, high; wire angle, 05°. 83.90

0	15.56	4.43u	0	15.56	
10	15.56	3.52u	10	15.56	
25	15.11	5.49	20	15.25	
50	14.77	5.60	30	15.04	5.55
74	11.64	5.39	50	14.77	5.60
99	9.59	5.23	75	11.43	5.39
151	8.86	3.98	100	9.62	5.22
199	8.24	3.66	150	8.88	3.99
294	7.16	2.06	200	8.22	3.63
395	5.90	1.33	250	7.65	2.90
490	5.31	1.03	300	7.09	2.00
592	4.78	0.49	400	5.86	1.30
792	4.43	0.62	500	5.27	0.98
991	3.82	0.83	600	4.75	0.49
1186	3.35	0.99	700	4.58	0.54
			800	4.40	0.61
			1000	3.79	0.89

N. B. SCOFIELD; January 19, 1951; 0506 GCT; 33°50'N, 118°37.5'W; sounding, 200 fm; wind, 200°, force 1; weather, overcast; sea, moderate; wire angle, 05°. 87.35

0	12.96	5.53	0	12.96	5.53
11	12.96	5.59	10	12.96	5.59
25	12.80	5.26	20	12.94	5.52
50	10.62	3.85	30	11.78	4.98
73	10.08	3.45	50	10.62	3.85
97	9.71	3.26	75	10.05	3.43
149	8.96	2.25	100	9.67	3.22
197	8.52	1.86	150	8.94	2.25
246	8.33	1.52	200	8.51	1.85
295	7.76	1.15	250	8.30	1.49
			300	(7.70)	(1.12)

N. B. SCOFIELD; January 19, 1951; 1149 GCT; 33°40'N, 118°58.5'W; sounding, 437 fm; wind, 220°, force 2; weather, light intermittent drizzle; sea, rough; wire angle, 07°. 87.40

0	13.44	-	0	13.44	
10	13.44	5.72	10	13.44	5.72
25	13.28	5.32	20	13.37	5.47
49	10.65	6.70u	30	12.80	5.23
75	10.06	4.64	50	10.60	4.95
98	9.71	3.67	75	10.06	4.64
152	8.97	3.20	100	9.67	3.64
200	8.72	2.62	150	8.99	3.23
249	8.30	2.05	200	8.72	2.62
296	7.76	2.25	250	8.28	2.05
350	7.38	1.48	300	7.71	2.23
398	7.06	1.00	400	7.04	1.00
496	6.26	1.26	500	6.23	1.26
588	5.68	1.12	600	5.62	1.09
697	5.27	0.95	700	(3.27)	(0.96)

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

87.50

N. B. SCOFIELD; January 19, 1951; 1839 GCT; 33°20'N, 119°39.5'W; sounding, 40 fm; wind, 270°, force 4; weather, partly cloudy; sea, very rough; wire angle, 05°.

0	12.10		0	12.10	
10	12.07		10	12.07	
25	11.92		20	11.98	
50	10.62		30	11.82	
			50	10.62	

87.60

N. B. SCOFIELD; January 20, 1951; 0155 GCT; 33°00'N, 120°21.5'W; sounding, 670 fm; wind, 300°, force 4; weather, cloudy; sea, high; wire angle, 14°.

0	13.85	5.67	0	13.85	5.67
10	13.86	5.72	10	13.86	5.72
24	13.82	5.32	20	13.83	5.48
48	13.56	-	30	13.78	5.20
71	10.59	4.76	50	13.25	4.95
97	9.81	3.10	75	10.41	4.65
146	9.02	2.42	100	9.74	3.00
192	8.25	2.37	150	8.98	2.41
282	7.34	1.60	200	8.08	2.33
374	6.70	0.81	250	7.57	1.96
465	6.08	0.52	300	7.22	1.40
563	5.54	0.42	400	6.51	0.68
656	5.20	0.38	500	5.88	0.48
859	4.80	0.36	600	5.39	0.39
			700	5.09	0.37
			800	4.90	0.37
			1000	(4.59)	

87.70

N. B. SCOFIELD; January 20, 1951; 1057, 1143 GCT; 32°37'N, 121°02'W; sounding, 2000 fm; wind, 290°, force 5; weather, cloudy; sea, high; wire angle, 10°, 05°.

0	14.02	6.02	0	14.02	6.02
9	14.04	5.74	10	14.04	5.73
24	13.93	5.38	20	13.98	5.42
53	12.74	5.24	30	13.84	5.31
78	10.08	4.71	50	12.97	5.27
107	9.38	4.50	75	10.25	4.78
160	8.60	3.25	100	9.52	4.54
208	8.13	2.24	150	8.74	3.54
			200	8.18	2.35
317	6.81	1.73	250	7.57	1.97
426	6.40	0.54	300	6.92	1.77
531	5.75	0.36	400	6.52	0.91
635	5.32	0.29	500	5.93	0.38
843	4.46	0.34	600	5.46	0.31
1054	3.78	0.51	700	5.07	0.29
1261	3.30	0.68	800	4.63	0.32
			1000	3.92	0.45

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

N. B. SCOFIELD; January 20, 1951; 1914 GCT; 32°22'N, 121°45'W; sounding, missing; wind, 280°, force 3; weather, cloudy; sea, very rough; wire angle, 11°. 87.80

0	15.12	5.28	0	15.12	5.28
10	15.13	4.90	10	15.13	4.90
25	15.12	5.13	20	15.12	5.08
49	15.10	5.09	30	15.12	5.12
73	14.84	4.95	50	15.10	5.08
96	10.70	4.80	75	14.81	4.94
148	8.60	3.90	100	10.45	4.75
194	8.34	3.25	150	8.58	3.85
285	6.99	2.13	200	8.29	3.17
383	6.08	1.12	250	7.52	2.52
477	5.63	0.57	300	6.82	1.95
566	5.46	0.33	400	5.97	0.99
769	4.63	0.38	500	5.60	0.49
964	4.08	0.46	600	5.32	0.33
1166	3.60	0.68	700	4.88	0.37
			800	4.52	0.38
			1000	3.98	(0.51)

N. B. SCOFIELD; January 21, 1951; 0228 GCT; 31°59'N, 122°24'W; sounding, 2300 fm; wind, 250°, force 2; weather, cloudy; sea, very rough; wire angle, 10°. 87.90

0	15.47	5.78	0	15.47	5.78
10	15.49	5.22	10	15.49	5.22
24	15.46	4.99	20	15.47	5.02
53	14.66	4.96	30	15.45	4.97
78	10.90	4.59	50	15.25	4.96
108	9.69	4.21	75	11.45	4.65
161	8.63	3.46	100	9.92	4.30
212	8.08	2.21	150	8.80	3.64
315	6.84	1.79	200	8.18	2.43
422	5.66	0.88	250	7.68	1.98
524	5.10	0.44	300	7.06	1.82
625	4.70	0.36	400	5.87	1.03
835	4.14	0.52	500	5.22	0.52
1047	3.64	0.71	600	4.79	0.36
			700	4.48	0.40
			800	4.22	0.49
			1000	3.75	0.68

CREST; January 19, 1951; 1841 GCT; 33°23.5'N, 117°52.5'W; sounding, 330 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 17°. 90.30

0	13.80	5.74	0	13.80	5.74
10	13.80	5.69	10	13.80	5.69
24	13.07	5.32	20	13.35	5.49
48	11.17	4.52	30	12.73	5.12
71	10.32	4.00	50	11.04	4.48
94	9.84	3.37	75	10.25	3.88
145	8.62	3.40	100	9.68	3.36
192	8.34	2.44	150	8.57	3.39
238	8.32	1.72	200	8.33	2.27
285	7.95	1.26	250	8.29	1.57
335	7.45	1.12	300	7.78	1.19
382	6.90	0.94	400	6.77	0.81
428	6.64	0.57	500	(6.25)	
475	6.38	0.46			

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

90.37

CREST; January 18, 1951; 1717 GCT; 33° 11'N, 118°23.5'W; sounding, 650 fm; wind, 160°, force 3; weather, cloudy; sea, rough; wire angle, 15°.

0	13.46	5.67	0	13.46	5.67
10	13.44	5.69	10	13.44	5.69
24	13.39	5.53	20	13.40	5.59
48	12.78	5.39	30	13.37	5.49
71	10.56	4.21	50	12.72	5.38
94	9.86	3.51	75	10.43	3.97
144	8.93	3.01	100	9.70	3.43
190	8.66	2.11	150	8.87	2.93
280	7.95	1.35	200	8.62	1.97
375	7.03	0.85	250	8.23	1.54
464	6.48	0.49	300	7.75	1.23
562	5.88	0.39	400	6.85	0.71
653	5.42	0.35	500	6.27	0.44
753	4.90	0.39	600	5.67	0.37
949	4.24	0.50	700	5.17	0.35
			800	4.69	0.39
			1000	(4.12)	(0.54)

90.45

CREST; January 18, 1951; 1247 GCT; 32°57'N, 118°56'W; sounding, 950 fm; wind, 320°, force 3; weather, moderate drizzle; sea, moderate; wire angle, 13°.

0	13.04	5.63	0	13.04	5.63
10	13.02	5.56	10	13.02	5.56
25	12.96	5.37	20	12.98	5.46
49	10.40	4.17	30	12.95	5.23
73	9.84	3.50	50	10.38	4.13
96	9.36	3.16	75	9.78	3.46
147	8.62	2.55	100	9.30	3.11
193	8.24	2.11	150	8.60	2.52
284	7.68	1.21	200	8.18	2.04
382	6.94	0.83	250	7.88	1.53
473	6.40	0.44	300	7.58	1.12
569	5.78	0.38	400	6.82	0.74
758	4.80	0.44	500	6.23	0.41
943	4.14	0.50	600	5.59	0.39
1136	3.85	0.67	700	5.07	0.41
			800	4.62	0.45
			1000	4.02	0.54

90.53

CREST; January 18, 1951; 0754 GCT; 32°38.5'N, 119°29'W; sounding, 750 fm; wind, 320°, force 1; weather, drizzle; sea, moderate; wire angle, 03°.

0	13.30	5.42	0	13.30	5.42
10	13.16	5.40	10	13.16	5.40
25	12.90	5.63	20	12.99	5.60
50	11.78	5.19	30	12.77	5.62
75	10.03	4.01	50	11.78	5.19
100	9.38	3.25	75	10.03	4.01
154	8.93	2.60	100	9.38	3.25
202	8.10	2.49	150	8.96	2.62
300	6.96	1.54	200	8.17	2.49
401	6.64	0.85	250	7.28	2.09
498	5.84	0.52	300	6.96	1.54
598	5.66	0.44	400	6.65	0.87
796	4.70	0.48	500	5.83	0.50
990	4.06	0.63	600	5.65	0.44
1191	3.88	0.69	700	5.19	0.44
			800	4.68	0.48
			1000	4.03	0.65

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

CREST; January 18, 1951; 0321 GCT; 32°23.5'N, 119°53.5'W; sounding, 480 fm; wind, 320°, force 1; weather, partly cloudy; sea, moderate; wire angle, 10°. 90.60

0	13.82	5.56	0	13.82	5.56
10	13.74	5.61	10	13.74	5.61
25	12.86	5.52	20	13.74	5.58
49	11.11	4.90	30	12.30	5.33
74	10.07	4.45	50	11.02	4.88
98	9.40	3.61	75	10.00	4.43
153	8.79	3.14	100	9.36	3.56
200	8.42	2.53	150	8.81	3.17
295	6.97	1.74	200	8.42	2.53
397	6.03	1.12	250	7.75	2.02
489	5.84	0.47	300	6.89	1.72
587	5.50	0.35	400	6.02	1.10
780	4.72	0.40	500	5.83	0.44
			600	5.44	0.35
			700	5.02	0.36
			800	(4.63)	

CREST; January 17, 1951; 2005, 2131 GCT; 32°11'N, 120°42.5'W; sounding, 2000 fm; wind, 320°, force 2; weather, partly cloudy; sea, very rough; wire angle, 04°, 09°. 90.70

0	14.49	5.56	0	14.49	5.56
10	14.36	5.64	10	14.36	5.64
25	14.24	5.63	20	14.36	5.63
50	13.62	5.64	30	14.16	5.64
75	11.36	5.25	50	13.62	5.64
99	10.44	4.73	75	11.36	5.25
152	9.00	3.23	100	10.44	4.71
199	8.56	2.62	150	9.04	3.29
294	7.35	1.53	200	8.54	2.58
396	6.74	0.76	250	7.96	2.02
490	5.95	0.53	300	7.29	1.47
590	5.48	0.35	400	6.71	0.74
786	4.70	0.49	500	5.88	0.50
980	4.08	0.63	600	5.43	0.35
1184	3.56	0.69	700	5.01	0.38
			800	4.64	0.50
595a)	5.45	-	1000	4.04	0.66
989	4.09	-	1200	3.53	
1186	3.51	-	1500	2.82	
1485	2.87	-	2000	2.09	
1732	2.44	-	2500	1.79	
1983	2.11	-			
2236	1.90	-			
2490	1.80	-			
2758	1.73	-			

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

90.80

CREST; January 17, 1951; 1554 GCT; 31°40'N, 120°55'W; sounding, 2050 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 25°.

0	16.26	4.48	0	16.26	4.48
9	16.26	5.04	10	16.25	5.00
23	16.22	5.20	20	16.22	5.17
45	16.00	5.19	30	16.31	5.20
68	15.54	4.96	50	15.95	5.15
89	11.92	5.27	75	14.25	5.04
133	10.22	4.64	100	11.38	5.20
171	8.76	3.59	150	9.57	4.17
248	7.84	2.73	200	8.32	3.18
329	6.60	1.73	250	7.81	2.70
408	5.86	1.14	300	7.10	2.01
493	5.54	0.69	400	5.89	1.21
665	4.80	0.32	500	5.51	0.67
841	4.28	0.46	600	5.09	0.39
1036	3.77	0.76	700	4.67	0.32
			800	4.37	0.40
			1000	3.87	0.74

90.90

CREST; January 17, 1951; 1024 GCT; 31°21'N, 121°43'W; sounding, 2200 fm; wind, 320°, force 3; weather, partly cloudy; sea, very rough; wire angle, 12°.

0	15.55	5.34	0	15.55	5.34
10	15.56	5.40	10	15.56	5.40
23	15.57	5.40	20	15.57	5.40
54	15.58	5.54	30	15.57	5.42
79	14.74	5.63	50	15.58	5.51
108	10.80	5.01	75	15.57	5.62
161	9.12	4.31	100	11.29	5.33
212	8.40	3.81	150	9.43	4.41
314	6.83	2.58	200	8.54	3.93
422	5.90	1.10	250	7.84	3.39
524	5.28	0.63	300	7.05	2.74
627	4.68	0.40	400	6.06	1.32
831	4.11	0.54	500	5.42	0.68
1034	3.62	0.81	600	4.83	0.44
1234	3.27	0.94	700	4.41	0.40
			800	4.16	0.50
			1000	3.71	0.77

90.100

CREST; January 17, 1951; 0451 GCT; 31°03'N, 122°31.5'W; sounding, 2250 fm; wind, calm; weather, partly cloudy; sea, very rough; wire angle, 07°.

0	16.12	4.82	0	16.12	4.82
10	16.16	-	10	16.16	
25	16.14	-	20	16.15	
55	15.62	-	30	16.13	
79	12.96	5.48	50	15.73	
108	10.43	-	75	13.50	
161	9.16	-	100	10.79	
213	8.56	-	150	9.38	
317	6.88	2.81	200	8.69	
425	5.48	1.42	250	8.08	
529	4.95	0.77	300	7.17	
633	4.94	0.46	400	5.74	1.72
836	4.16	0.62	500	5.01	0.91
1044	3.64	0.78	600	4.95	0.50
1245	3.20	0.95	700	4.76	0.50
			800	4.28	0.60
			1000	3.71	0.75

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

90.110

CREST; January 16, 1951; 2316 GCT; 30°44'N, 123°20'W; sounding, 1700 fm; wind, 320°, force 4; weather, partly cloudy; sea, high; wire angle, 20°.

0	15.78	5.53	0	15.78	5.53
9	15.76	5.41	10	15.76	5.41
23	15.76	5.39	20	15.76	5.39
51	15.49	5.57	30	15.72	5.44
75	14.40	5.58	50	15.49	5.57
102	10.48	5.45	75	14.40	5.58
150	9.05	4.10	100	10.64	5.47
200	8.45	3.68	150	9.05	4.10
298	7.24	2.90	200	8.45	3.68
400	6.04	1.58	250	7.88	3.36
497	5.14	0.84	300	7.21	2.86
595	4.59	0.49	400	6.04	1.58
787	4.26	0.46	500	5.12	0.83
986	3.72	0.72	600	4.57	0.48
1185	3.31	0.93	700	4.37	0.47
			800	4.24	0.46
			1000	3.69	0.74

90.120

CREST; January 16, 1951; 1601 GCT;[a] 30°26'N; 124°04.5'W; sounding, 2350 fm; wind, 320°, force 5; weather, partly cloudy; sea, high; wire angle, 25°.

765	4.48
788	4.38
811	4.26
834	4.20
857	4.13
880	4.01
903	3.98
927	3.90
951	3.84

90.120

CREST; January 16, 1951; 1739 GCT; 30°26'N, 124°04.5'W; sounding, 2350 fm; wind, 320°, force 5; weather, cloudy; sea, high; wire angle, 45°.

0	16.90	5.39	0	16.90	5.39
8	16.91	5.42	10	16.91	5.42
22	16.92	5.37	20	16.92	5.38
45	16.90	5.40	30	16.91	5.37
66	15.88	5.63	50	16.90	5.45
89	13.28	5.74	75	14.45	5.68
133	10.09	4.95	100	12.25	5.68
178	9.02	4.11	150	9.62	4.60
267	7.86	3.37	200	8.68	3.87
351	6.82	2.60	250	8.05	3.50
440	5.73	1.60	300	7.46	3.12
525	5.10	0.92	400	6.19	2.10
694	4.76	0.35	500	5.23	1.09
872	4.12	0.58	600	4.92	0.60
1069	3.62	0.72	700	4.74	0.35
			800	4.40	0.45
			1000	3.77	0.68

a) Test cast.

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5101

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

93.30

CREST; January 19, 1951; 2326 GCT; 32°49.5'N, 117°32.5'W; sounding, 650 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°.

0	13.65	5.90	0	13.65	5.90
10	13.61	5.84	10	13.61	5.84
24	13.46	5.77	20	13.49	5.79
49	10.97	4.72	30	13.44	5.60
73	10.10	4.15	50	10.91	4.67
98	9.62	3.90	75	10.02	4.12
150	9.05	2.54	100	9.58	3.87
197	8.35	2.58	150	9.05	2.54
243	8.60	1.32	200	8.37	2.57
288	8.32	0.99	250	8.59	1.22
340	7.93	0.88	300	8.23	0.97
386	7.22	0.73	400	7.12	0.68
479	6.50	0.54	500	6.32	0.49
580	5.81	0.39	600	5.72	0.39
677	5.42	0.35	700	(5.34)	

93.40

CREST; January 20, 1951; 0449 GCT; 32°30'N, 118°11.5'W; sounding, 950 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°.

0	13.12	5.58	0	13.12	5.58
10	13.12	5.50	10	13.12	5.50
24	13.13	5.53	20	13.13	5.52
52	10.88	4.21	30	13.14	5.54
75	9.76	3.68	50	11.00	4.40
104	9.27	3.12	75	9.76	3.68
151	8.63	2.56	100	9.32	3.22
199	8.24	2.19	150	8.64	2.56
294	7.52	1.07	200	8.22	2.17
394	6.65	0.63	250	7.85	1.65
489	6.14	0.45	300	7.48	1.03
584	5.69	0.35	400	6.60	0.60
773	4.76	0.36	500	6.09	0.44
972	4.10	0.57	600	5.59	0.35
1173	3.59	0.75	700	5.09	0.35
			800	4.65	0.38
			1000	4.02	0.59

93.50

CREST; January 20, 1951; 1059 GCT; 32°09'N, 118°57'W; sounding, 900 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 25°.

0	14.28	5.66	0	14.28	5.66
9	14.28	5.47	10	14.28	5.47
22	14.30	5.51	20	14.31	5.49
50	14.26	5.54	30	14.30	5.52
72	12.25	5.37	50	14.26	5.54
98	10.20	4.75	75	11.80	5.32
145	9.14	3.37	100	10.16	4.66
190	8.16	3.48	150	9.02	3.37
280	7.70	1.59	200	8.03	3.39
374	6.48	1.05	250	7.78	2.29
463	6.41	0.56	300	7.44	1.42
554	5.78	0.41	400	6.44	0.91
738	4.87	0.37	500	6.23	0.47
934	4.24	0.56	600	5.47	0.37
1139	3.98	-	700	4.99	0.37
			800	4.65	0.41
			1000	4.11	

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

CREST; January 20, 1951; 1739 GCT; 31°50'N, 119°40.5'W; sounding, 1800 fm; wind, 270°, force 5; weather, partly cloudy; sea, high; wire angle, 35°. 93.60

0	15.15	5.48	0	15.15	5.48
8	15.16	5.41	10	15.16	5.41
24	15.16	5.39	20	15.16	5.40
49	15.07	4.67	30	15.14	5.34
74	10.33	4.45	50	15.07	4.65
99	9.52	3.25	75	10.29	4.44
147	8.54	2.45	100	9.49	3.15
196	7.51	2.59	150	8.46	2.45
293	6.98	1.23	200	7.47	2.57
387	6.50	0.74	250	7.17	1.95
483	5.48	0.60	300	6.94	1.15
576	5.44	0.37	400	6.36	0.70
772	4.62	0.43	500	5.46	0.57
970	4.00	0.62	600	5.40	0.37
1176	3.57	0.76	700	4.95	0.37
			800	4.52	0.44
			1000	3.92	0.65

CREST; January 20, 1951; 2257 GCT; 31°33'N, 120°15'W; sounding, 2180 fm; wind, 270°, force 5; weather, partly cloudy; sea, very rough; wire angle, 35°. 93.70

0	15.10	5.53	0	15.10	5.53
9	14.98	5.54	10	14.95	5.54
25	14.25	5.66	20	14.47	5.62
50	13.71	5.49	30	14.12	5.65
74	12.84	5.40	50	13.71	5.49
98	11.01	4.97	75	12.80	5.38
144	9.32	3.58	100	10.90	4.87
187	8.80	2.89	150	9.24	3.45
279	7.52	2.37	200	8.64	2.75
364	6.72	1.20	250	7.91	2.47
455	6.22	0.62	300	7.30	2.21
542	5.41	0.50	400	6.52	0.88
725	4.83	0.40	500	5.83	0.53
916	4.18	0.56	600	5.17	0.43
1114	3.66	0.76	700	4.89	0.40
			800	4.63	0.43
			1000	3.93	0.67

CREST; January 21, 1951; 0448, 0505 GCT; 31°12'N, 120°55'W; sounding, 2150 fm; wind, 270°, force 4; weather, partly cloudy; sea, very rough; wire angle, 12°, 12°. 93.80

0	16.52	5.40	0	16.52	5.40
10	16.55	5.38	10	16.55	5.38
			20	16.56	5.32
29	16.57	5.30	30	16.56	5.30
57	16.56	5.32	50	16.56	5.30
83	14.55	5.66	75	16.56	5.61
107	12.40	5.43	100	12.99	5.54
156	9.84	4.44	150	10.06	4.57
204	8.75	3.28	200	8.82	3.35
303	7.78	1.88	250	8.24	2.53
398	6.86	0.97	300	7.82	1.90
497	6.40	0.49	400	6.83	0.94
595	5.68	0.38	500	6.38	0.47
792	4.77	0.42	600	5.64	0.38
992	4.06	0.61	700	5.09	0.38
1197	3.54	0.79	800	4.75	0.42
			1000	4.03	0.62

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

93.90 CREST; January 21, 1951; 1047 GCT; 30°50'N, 121°35'W; sounding, 2280 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°.

0	16.79	5.19	0	16.79	5.19
10	16.80	5.02	10	16.80	5.02
25	16.80	5.36	20	16.80	5.32
52	16.80	5.28	30	16.80	5.36
76	16.60	5.35	50	16.80	5.30
103	13.10	5.53	75	16.80	5.34
152	10.42	4.92	100	13.30	5.52
201	9.00	4.28	150	10.51	4.96
299	7.36	3.01	200	9.03	4.29
403	6.34	1.55	250	8.08	3.68
502	5.62	0.83	300	7.34	2.99
599	4.92	0.57	400	6.36	1.58
795	4.31	0.41	500	5.64	0.83
998	3.80	0.68	600	4.90	0.57
1205	3.33	0.90	700	4.49	0.46
			800	4.29	0.42
			1000	3.78	0.68

97.32 CREST; January 23, 1951; 0232 GCT; 32°11'N, 117°11'W; sounding, 750 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, missing.

0	13.43	5.58	0	13.43	5.58
10	13.18	5.77	10	13.18	5.77
25	12.92	5.55	20	12.92	5.63
50	10.51	4.22	30	12.92	5.33
75	9.89	3.39	50	10.51	4.22
100	9.79	2.50	75	9.89	3.39
153	9.63	1.96	100	9.79	2.50
202	9.12	1.49	150	9.64	1.84
298	8.30	1.19	200	9.17	1.50
398	7.40	0.77	250	8.66	1.32
493	6.48	0.59	300	8.27	1.18
593	5.71	0.38	400	7.37	0.76
788	4.87	0.35	500	6.42	0.57
985	4.23	0.54	600	5.66	0.38
			700	5.18	0.35
			800	4.84	0.36
			1000	(4.18)	(0.56)

97.40 CREST; January 22, 1951; 2203 GCT; 31°56'N, 117°50'W; sounding, 350 fm; wind, 360°, force 4; weather, cloudy; sea, very rough; wire angle, 22°.

0	15.77	5.20	0	15.77	5.20
10	15.72	5.34	10	15.72	5.34
23	15.44	5.37	20	15.52	5.37
46	15.38	5.51	30	15.42	5.41
70	14.93	5.46	50	15.38	5.52
92	12.68	5.52	75	14.80	5.45
139	9.64	4.61	100	11.75	5.46
182	8.60	3.23	150	9.20	4.32
224	8.44	2.44	200	8.52	2.79
266	7.67	1.96	250	7.84	2.13
314	7.56	1.34	300	7.58	1.45
358	6.74	1.43	400	6.65	0.92
404	6.64	0.87	500	6.14	0.48
448	6.40	0.61			
547	5.92	0.38			

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

CREST; January 22, 1951; 1631 GCT; 31°31'N, 118°21'W; sounding, 1000 fm; wind, 360°, force 5; weather, cloudy; sea, very rough; wire angle, 15°. 97.50

0	15.31	5.35	0	15.31	5.35
10	15.32	5.49	10	15.32	5.49
25	15.30	5.47	20	15.31	5.47
53	14.50	5.51	30	15.29	5.47
77	13.80	5.47	50	14.70	5.51
105	11.62	4.59	75	13.87	5.47
155	9.88	3.07	100	12.20	4.77
207	9.30	2.46	150	9.95	3.16
309	8.12	1.38	200	9.36	2.55
416	7.42	0.62	250	8.82	1.98
519	6.28	0.43	300	8.23	1.46
622	5.61	0.40	400	7.49	0.71
822	4.72	-	500	6.55	0.46
1024	3.97	0.64	600	5.69	0.40
1226	3.46	0.84	700	5.29	0.42
			800	4.82	0.48
			1000	4.04	0.62

CREST; January 22, 1951; 1056 GCT; 31°12'N, 119°04.5'W; sounding, 1950 fm; wind, 360°, force 5; weather, partly cloudy; sea, very rough; wire angle, 25°. 97.60

0	15.99	5.31	0	15.99	5.31
10	15.98	5.42	10	15.98	5.42
27	16.01	5.46	20	16.02	5.46
55	15.84	5.47	30	16.01	5.46
82	13.20	5.39	50	15.86	5.47
109	11.02	4.93	75	13.98	5.42
161	9.09	3.76	100	11.60	5.18
213	9.06	2.27	150	9.11	3.95
317	7.81	1.33	200	9.07	2.57
416	6.69	0.73	250	8.87	1.84
519	5.96	0.40	300	8.12	1.44
618	5.41	0.33	400	6.84	0.83
819p	4.56	0.46	500	6.08	0.44
1004p	3.93	0.66	600	5.51	0.33
1177p	3.47	0.87	700	5.02	0.37
			800	4.62	0.44
			1000	3.94	0.66

CREST; January 22, 1951; 0518 GCT; 30°53.5'N, 119°48'W; sounding, 1950 fm; wind, 360°, force 6; weather, partly cloudy; sea, very rough; wire angle, 18°. 97.70

0	16.10	5.32	0	16.10	5.32
10	16.12	-	10	16.12	5.31
29	16.11	5.29	20	16.12	5.29
57	16.00	5.57	30	16.11	5.29
85	12.62	5.41	50	16.02	5.52
113	11.04	5.01	75	14.12	5.51
169	9.18	4.20	100	11.64	5.21
223	8.24	3.28	150	9.78	4.48
333	6.85	1.96	200	8.60	3.69
437	6.76	0.60	250	7.82	2.95
548	6.02	0.41	300	7.06	2.34
654	5.39	0.37	400	6.79	0.93
869	4.48	0.52	500	6.43	0.43
1085	3.80	0.73	600	5.67	0.38
1287	3.22	0.92	700	5.17	0.37
			800	4.75	0.45
			1000	4.04	0.66

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

97.80

CREST; January 21, 1951; 2230, 2308 GCT; 30°34'N, 120°34.5'W; sounding, 2200 fm; wind, 360°, force 5; weather, partly cloudy; sea, very rough; wire angle, 21°, 34°.

0	15.80	5.23	0	15.80	5.23
10	15.80	5.40	10	15.80	5.40
28	15.68	5.33	20	15.71	5.38
56	15.50	5.45	30	15.68	5.33
83	12.36	4.98	50	15.67	5.43
108	11.12	4.07	75	13.10	5.18
161	9.51	2.81	100	11.43	4.38
213	8.28	3.23	150	9.83	2.78
316	7.07	1.61	200	8.58	3.13
417	6.86	0.56	250	7.62	2.87
524	6.06	0.41	300	7.13	1.88
627	5.46	0.28	400	6.88	0.60
			500	6.29	0.42
606a)	5.42	0.32	600	5.42	0.30
824	4.52	0.40	700	5.14	0.34
1036	3.94	0.58	800	4.63	0.39
1247	3.34	0.83	1000	4.00	0.54

97.90

CREST; January 21, 1951; 1601 GCT; 30°12'N, 121°17'W; sounding, 2100 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 35°.

0	16.05	5.49	0	16.05	5.49
9	16.06	5.17	10	16.06	5.17
21	16.07	5.49	20	16.07	5.47
44	16.20	5.33	30	16.12	5.43
63	15.88	5.32	50	16.20	5.30
83	13.48	5.61	75	15.10	5.51
119	10.68	4.80	100	11.72	5.43
156	9.83	4.15	150	9.95	4.24
234	8.13	3.45	200	8.84	3.71
314	6.96	2.35	250	7.86	3.27
393	6.30	1.12	300	7.12	2.59
472	4.92	0.66	400	6.19	1.07
631	4.93	0.37	500	4.93	0.57
803	4.40	0.47	600	4.92	0.38
990	3.77	0.65	700	4.78	0.37
			800	4.41	0.47
			1000	(3.74)	(0.66)

100.30

CREST; January 12, 1951; 1733 GCT; 31°40.5'N, 116°46.5'W; sounding, 250 fm; wind, 090°, force 1; weather, partly cloudy; sea, rough; wire angle, 03°.

0	13.36	5.69	0	13.36	5.69
10	13.32	5.70	10	13.32	5.70
25	12.98	5.55	20	13.09	5.62
50	10.56	4.65	30	12.70	5.42
75	10.05	3.91	50	10.56	4.65
98	10.46	2.59	75	10.05	3.91
151	9.10	2.07	100	10.46	2.55
200	8.49	1.61	150	9.14	2.08
247	8.10	1.34	200	8.49	1.61
295	7.68	1.04	250	8.06	1.33
348	7.46	0.74	300	7.64	1.00
398	6.80	0.68	400	(6.77)	(0.68)

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

CREST; January 13, 1951; 2328 GCT; 31°21.5'N, 117°29'W; sounding, 1070 fm; wind, 320°, force 3; weather, partly cloudy; sea, high; wire angle, 28°. 100.40

0	15.60	5.37	0	15.60	5.37
9	15.34	5.30	10	15.28	5.30
21	14.61	5.74	20	14.65	5.74
42	12.99	5.60	30	14.36	5.71
63	11.79	5.32	50	12.55	5.50
82	11.38	4.94	75	11.45	5.09
124	10.96	2.40	100	11.18	4.17
163	10.27	2.05	150	10.57	2.14
242	8.19	-	200	8.97	1.81
324	8.22	0.98	250	8.19	1.45
402	6.88	0.78	300	8.21	1.07
488	6.57	0.44	400	6.89	0.78
655	5.48	0.30	500	6.52	0.42
829	4.65	0.41	600	5.87	0.32
1025	3.98	0.58	700	5.22	0.32
			800	4.76	0.38
			1000	4.06	0.57

CREST; January 14, 1951; 0530 GCT; 31°02.5'N, 118°13'W; sounding, 1000 fm; wind, 320°, force 3; weather, partly cloudy; sea, very rough; wire angle, 10°. 100.50

0	15.11	5.54	0	15.11	5.54
10	15.14	5.57	10	15.14	5.57
24	15.06	5.50	20	15.08	5.54
54	12.40	4.90	30	15.05	5.42
78	11.28	4.44	50	12.68	4.99
108	10.22	3.88	75	11.41	4.51
162	9.31	2.85	100	10.45	4.03
215	8.67	2.55	150	9.48	2.98
321	7.30	1.79	200	8.84	2.60
430	6.33	0.74	250	8.25	2.37
535	5.70	0.41	300	7.59	2.00
641	5.28	0.33	400	6.54	0.96
851	4.42	0.45	500	5.89	0.47
1059	3.84	0.66	600	5.42	0.34
1261	3.26	0.93	700	5.05	0.35
			800	4.64	0.44
			1000	3.99	0.58

CREST; January 14, 1951; 1115, 1313 GCT; 30°43.5'N, 118°56'W; sounding, 1550 fm; wind, 320°, force 3; weather, clear; sea, very rough; wire angle, 12°, 10°. 100.60

0	16.30	5.28	0	16.30	5.28
10	16.32	5.54	10	16.32	5.54
24	16.32	5.47	20	16.33	5.51
54	16.34	5.51	30	16.32	5.45
79	13.84	5.51	50	16.34	5.50
108	11.64	5.38	75	14.85	5.53
161	9.44	3.68	100	12.11	5.45
214	8.77	3.21	150	9.70	3.86
318	8.56	0.95	200	8.90	3.33
427	6.74	0.73	250	8.64	2.41
531	6.06	0.47	300	8.57	1.16
635	5.48	0.44	400	7.28	0.77
			500	6.23	0.55
778	4.71	0.49	600	5.67	0.44
975	4.08	0.57	700	5.11	0.44
1180	3.62	0.74	800	4.61	0.52
			1000	4.02	0.60

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

100.70

CREST; January 14, 1951; 1824 GCT; 30°24'N, 119°40'W; sounding, 2070 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 03°.

0	16.70	5.28	0	16.70	5.28
10	16.68	5.34	10	16.68	5.34
25	16.68	5.44	20	16.68	5.42
50	16.09	5.51	30	16.68	5.47
75	13.05	5.41	50	16.09	5.51
100	10.92	4.94	75	13.05	5.41
153	9.70	3.05	100	10.92	4.94
201	9.36	2.32	150	9.76	3.12
299	8.30	1.55	200	9.37	2.33
398	7.13	0.75	250	8.92	1.83
495	6.24	0.55	300	8.29	1.53
597	5.90	0.37	400	7.10	0.73
793	4.76	0.40	500	6.21	0.54
986	4.11	0.55	600	5.90	0.37
1189	3.53	0.73	700	5.37	0.37
			800	4.72	0.41
			1000	4.08	0.55

100.80

CREST; January 14, 1951; 2312 GCT; 29°59'N, 120°09'W; sounding, 2100 fm; wind, 320°, force 1; weather, cloudy; sea, rough; wire angle, 00°.

0	16.26	5.41	0	16.26	5.41
10	15.91	5.43	10	15.91	5.43
25	15.82	5.45	20	15.84	5.44
50	15.78	5.47	30	15.80	5.46
75	12.92	5.32	50	15.78	5.47
101	11.33	4.24	75	12.92	5.32
153	9.82	2.63	100	11.38	4.27
200	9.05	2.55	150	9.88	2.65
295	7.34	1.74	200	9.05	2.55
395	6.62	0.98	250	8.06	2.20
491	5.62	0.65	300	7.29	1.68
592	5.02	0.47	400	6.57	0.94
790	4.48	0.46	500	5.56	0.62
984	3.88	0.64	600	5.00	0.47
1186	3.40	0.84	700	4.74	0.46
			800	4.44	0.46
			1000	3.84	0.66

100.80

CREST; January 15, 1951; 0030 GCT;[a] 29°59'N, 120°09'W; sounding, 2100 fm; wind, 320°, force 1; weather, cloudy; sea, rough; wire angle, 00°.

0	16.28
10	15.85
20	15.80
30	15.79
40	15.78
50	15.76
60	15.11
70	13.22
79	12.43
89	12.02
98	11.68
108	11.23
118	10.67
127	10.42

a) Bathythermograph calibration cast.

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

CREST; January 15, 1951; 0506 GCT; 29°40.5'N, 120°47'W; sounding, 2200 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 00°. 100.90

0	17.16	5.33	0	17.16	5.33
10	17.16	5.25	10	17.16	5.25
25	17.09	5.26	20	17.12	5.24
50	17.06	5.37	30	17.08	5.28
75	15.29	5.54	50	17.06	5.37
99	13.84	5.55	75	15.29	5.54
152	10.20	4.64	100	13.80	5.54
199	9.00	4.21	150	10.36	4.67
294	7.46	2.51	200	8.96	4.19
393	6.31	1.45	250	8.11	3.29
488	5.64	0.72	300	7.38	2.44
589	5.19	0.35	400	6.24	1.38
784	4.40	0.41	500	5.58	0.66
978	3.90	0.64	600	5.15	0.35
1127	3.54	0.80	700	4.75	0.35
			800	4.35	0.42
			1000	3.84	0.66

CREST; January 15, 1951; 1036 GCT; 29°20.5'N, 121°27'W; sounding, 2200 fm; wind, calm; weather, clear; sea, moderate; wire angle, 07°. 100.100

0	17.66	5.33	0	17.66	5.33
10	17.66	5.36	10	17.66	5.36
25	17.65	5.30	20	17.65	5.32
50	17.62	5.41	30	17.64	5.32
74	17.62	5.26	50	17.62	5.41
98	15.70	5.55	75	17.61	5.26
150	11.82	4.90	100	15.55	5.54
198	9.81	4.24	150	11.82	4.90
295	8.04	2.95	200	9.74	4.23
395	6.85	1.46	250	8.72	3.54
490	5.98	0.86	300	7.96	2.88
590	5.34	0.51	400	6.80	1.29
787	4.52	0.39	500	5.91	0.84
979	3.88	0.63	600	5.28	0.50
1186	3.40	0.87	700	4.82	0.42
			800	4.48	0.41
			1000	3.82	0.66

CREST; January 15, 1951; 1608 GCT; 29°00.5'N, 122°06'W; sounding, 2300 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 12°. 100.110

0	17.85	5.39	0	17.85	5.39
10	17.86	5.34	10	17.86	5.34
25	17.86	5.30	20	17.85	5.31
49	17.85	5.41	30	17.85	5.32
72	17.86	5.33	50	17.85	5.42
96	15.62	5.67	75	17.85	5.33
148	12.42	4.99	100	15.07	5.67
194	10.28	4.30	150	12.30	4.93
288	8.23	3.36	200	10.09	4.23
387	6.76	1.77	250	8.89	3.71
480	5.94	0.86	300	8.02	3.18
578	5.42	0.50	400	6.63	1.62
770	4.68	0.49	500	5.81	0.75
962	4.10	0.59	600	5.33	0.50
1165	3.60	1.18	700	4.93	0.51
			800	4.57	0.50
			1000	4.01	0.68

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

100.120

CREST; January 15, 1951; 2131 GCT;[a] 28°40.5'N, 122°46'W; sounding, 2350 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 10°.

815	4.46				
839	4.38				
863	4.30				
888	4.25				
910	4.19				
935	4.10				
959	4.06				
982	4.02				
1007	3.96				

100.120

CREST; January 15, 1951; 2331 GCT; 28°40.5'N, 122°46'W; sounding, 2350 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 05°.

0	18.04	4.85	0	18.04	4.85
10	17.90	5.15	10	17.90	5.15
25	17.86	5.17	20	17.87	5.17
49	17.84	5.01	30	17.86	5.13
74	17.85	5.12	50	17.84	5.02
99	15.92	5.30	75	17.85	5.13
151	13.25	4.84	100	15.85	5.29
198	10.40	4.38	150	13.28	4.85
294	7.88	3.06	200	10.33	4.34
393	6.55	1.62	250	8.77	3.76
489	5.86	0.87	300	7.78	3.00
589	5.47	0.47	400	6.48	1.54
784	4.56	0.41	500	5.81	0.83
974	4.01	0.60	600	5.44	0.45
1179	3.47	0.74	700	4.99	0.41
			800	4.49	0.41
			1000	3.94	0.62

103.40

CREST; January 12, 1951; 0421 GCT; 30°44.5'N, 117°07.5'W; sounding, 750 fm; wind, 270°, force 5; weather, cloudy; sea, very rough; wire angle, 10°.

0	14.50	5.38	0	14.50	5.38
10	14.30	5.70	10	14.30	5.70
25	14.02	5.63	20	14.08	5.67
49	12.20	4.90	30	13.99	5.52
73	11.18	3.75	50	12.15	4.85
97	10.46	3.45	75	11.09	3.72
148	9.51	2.55	100	10.39	3.42
196	8.96	1.90	150	9.48	2.52
290	8.52	0.84	200	8.93	1.83
387	7.04	0.81	250	8.67	1.08
484	6.26	0.49	300	8.47	0.82
581	5.70	0.38	400	6.91	0.79
773	4.90	0.40	500	6.16	0.45
972	3.96	0.62	600	5.61	0.38
1180	3.48	0.80	700	5.17	0.38
			800	4.78	0.42
			1000	3.86	0.64

a) Test cast.

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

103.50

CREST; January 11, 1951; 2254 GCT; 30°32'N, 117°40'W; sounding, 1200 fm; wind, 270°, force 3; weather, cloudy; sea, high; wire angle, 24°.

0	15.41	5.30	0	15.41	5.30
9	15.42	5.38	10	15.42	5.38
23	15.31	5.38	20	15.33	5.39
46	12.32	4.88	30	15.31	5.27
68	10.50	4.62	50	11.70	4.79
89	10.04	3.91	75	10.32	4.47
133	9.24	2.94	100	9.83	3.54
174	8.86	2.39	150	9.06	2.69
255	7.76	1.74	200	8.52	2.14
341	7.46	0.72	250	7.79	1.77
423	6.58	0.55	300	7.56	1.22
511	6.01	0.31	400	6.84	0.56
690	5.00	0.32	500	6.06	0.33
873	4.29	0.55	600	5.54	0.32
1073	3.79	0.64	700	4.95	0.33
			800	4.51	0.44
			1000	3.95	0.62

103.60

CREST; January 11, 1951; 1652 GCT; 30°04'N, 118°19.5'W; sounding, 1950 fm; wind, 270°, force 3; weather, rain showers; sea, rough; wire angle, 17°.

0	15.31	5.08	0	15.31	5.08
10	15.32	5.43	10	15.32	5.43
24	15.32	5.52	20	15.32	5.51
48	12.90	5.58	30	15.30	5.56
72	11.29	4.86	50	12.74	5.56
95	10.68	4.48	75	11.21	4.82
146	9.12	3.40	100	10.47	4.38
191	8.90	2.35	200	8.83	1.82
284	8.49	1.00	250	8.62	1.26

103.70

CREST; January 11, 1951; 1049 GCT; 29°45'N, 119°03'W; sounding, 1650 fm; wind, 270°, force 3; weather, partly cloudy; sea, very rough; wire angle, 20°.

0	16.63	5.41	0	16.63	5.41
9	16.64	5.31	10	16.64	5.31
23	16.65	5.39	20	16.65	5.39
52	16.09	5.47	30	16.64	5.43
75	13.32	5.52	50	16.63	5.46
104	11.45	5.11	75	13.32	5.52
155	10.54	3.20	100	11.58	5.19
205	9.63	2.29	150	10.59	3.37
304	8.06	1.84	200	9.72	2.32
410	6.81	0.98	250	8.87	2.06
511	6.36	0.50	300	8.12	1.87
611	5.50	0.37	400	6.90	1.07
812	4.52	0.44	500	6.37	0.54
1015	3.90	0.64	600	5.62	0.39
1217	3.42	0.80	700	4.93	0.39
			800	4.56	0.44
			1000	3.94	0.62

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OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

103.80

CREST; January 11, 1951; 0451 GCT; 29°27'N, 119°45.5'W; sounding, 2050 fm; wind, 270°, force 4; weather, partly cloudy; sea, very rough; wire angle, 25°.

0	17.44	5.06	0	17.44	5.06
10	17.47	5.16	10	17.47	5.16
24	17.46	5.25	20	17.46	5.22
50	17.46	5.20	30	17.45	5.25
72	14.70	5.65	50	17.46	5.20
97	13.10	5.47	75	14.48	5.65
143	10.72	4.09	100	12.95	5.38
188	9.58	3.97	150	10.52	4.06
275	8.04	2.41	200	9.32	3.83
371	6.92	1.32	250	8.43	2.84
459	6.20	0.81	300	7.73	2.08
			400	6.61	1.17

107.40

CREST; January 9, 1951; 2222 GCT; 30°10.5'N, 116°43.5'W; sounding, 1450 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 15°.

0	15.52	5.63	0	15.52	5.63
10	15.50	5.71	10	15.50	5.71
24	15.44	5.73	20	15.44	5.72
53	11.06	4.18	30	15.44	5.66
76	10.30	3.67	50	11.33	4.27
104	9.74	2.66	75	10.32	3.68
155	9.32	2.09	100	9.82	2.73
206	8.99	1.50	150	9.34	2.14
306	7.88	0.92	200	9.03	1.55
414	6.80	0.51	250	8.53	1.21
514	6.10	0.34	300	7.94	0.94
616	5.53	0.32	400	6.93	0.54
814	4.78	0.38	500	6.19	0.34
1022	4.11	0.58	600	5.62	0.32
			700	5.18	0.34
			800	4.83	0.36
			1000	4.18	0.55

107.50

CREST; January 10, 1951; 0420 GCT; 29°51'N, 117°22'W; sounding, 1350 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 35°.

0	16.66	5.33	0	16.66	5.33
8	16.66	5.32	10	16.66	5.29
19	16.66	5.11	20	16.66	5.10
40	16.64	5.35	30	16.64	5.14
59	14.16	5.56	50	15.09	5.44
78p	11.04	4.05	75	11.35	4.43
154p	9.26	2.97	100	10.27	3.66
208p	8.57	2.07	150	9.32	3.02
266p	7.86	1.32	200	8.67	2.22
344p	6.98	1.08	250	8.07	1.48
451p	6.69	0.40	300	7.42	1.23
565p	5.72	0.25	400	6.76	0.65
719p	4.98	0.34	500	6.39	0.30
			600	5.48	0.26
			700	5.03	0.33

OBSERVED			INTERPOLATED		
Z m	T °C	O_2 ml/L	Z m	T °C	O_2 ml/L

CREST; January 10, 1951; 1032 GCT; 29°31.5'N, 118°01'W; sounding, 1980 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 05°. 107.60

0	16.81	5.47	0	16.81	5.47
10	16.82	5.52	10	16.82	5.52
25	16.83	5.54	20	16.82	5.55
56	14.66	5.76	30	16.82	5.57
80	12.34	5.02	50	15.50	5.73
109	10.32	4.45	75	12.65	5.14
162	10.23	2.64	100	10.48	4.66
214	9.55	2.02	150	10.23	2.85
320	8.15	0.89	200	9.84	2.21
430	7.09	0.51	250	8.98	1.58
534	6.08	0.51	300	8.36	1.05
638	5.42	0.41	400	7.36	0.52
835	4.54	0.54	500	6.41	0.51
1063	3.80	0.69	600	5.62	0.43
			700	5.11	0.46
			800	4.68	0.52
			1000	3.98	0.66

CREST; January 10, 1951; 1723 GCT; 29°09.5'N, 118°43.5'W; sounding, 1650 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 05°. 107.70

0	17.30	5.41	0	17.30	5.41
10	17.30	5.31	10	17.30	5.31
25	17.24	5.32	20	17.25	5.30
50	15.37	5.78	30	17.17	5.43
74	13.75	5.61	50	15.37	5.78
99	11.69	5.13	75	13.69	5.59
152	9.22	3.94	100	11.60	5.12
199	8.45	3.84	150	9.28	3.97
294	7.41	1.70	200	8.44	3.82
396	6.98	0.88	250	7.84	2.73
492	6.16	0.52	300	7.35	1.64
593	5.78	0.32	400	6.95	0.86
793	4.78	0.40	500	6.11	0.51
990	4.05	0.70	600	5.76	0.33
1198	3.48	0.80	700	5.32	0.34
			800	4.75	0.42
			1000	4.02	0.72

CREST; January 10, 1951; 2239 GCT; 28°50'N, 119°22.5'W; sounding, 2020 fm; wind, 270°, force 2; weather, cloudy; sea, rough; wire angle, 04°. 107.80

0	17.28	5.22	0	17.28	5.22
10	17.24	5.11	10	17.24	5.11
25	17.14	5.24	20	17.18	5.19
49	16.65	5.13	30	17.08	5.25
74	13.38	5.46	50	16.60	5.14
99	12.13	4.96	75	13.25	5.46
152	11.88	1.39	100	12.12	4.92
201	11.08	1.41	150	11.90	1.41
302	9.01	1.08	200	11.14	1.41
399	7.88	0.63	250	9.92	1.32
496	6.48	0.32	300	9.05	1.09
597	6.04	0.32	400	7.87	0.60
794	5.06	0.34	500	6.46	0.32
989	4.12	0.60	600	6.02	0.32
1196	3.56	0.78	700	5.59	0.34
			800	5.02	0.35
			1000	4.08	0.62

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OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

110.35

HORIZON; January 12, 1951; 2122 GCT; 29°47.5'N, 116°02'W; sounding, 825 fm; wind, 320°, force 8; weather, cloudy; sea, very high; wire angle, 44°.

110.35

OBSERVED		INTERPOLATED	
0	15.47	0	15.47
8	15.50	10	15.50
19	15.48	20	15.47
37	15.41	30	15.43
55	12.30	50	14.00
71	11.34	75	(11.26)
177	9.96	100	(10.80)
243	8.80	150	(10.21)
305	8.30	200	9.63
373	7.75	250	8.72
512	6.26	300	8.33
669	5.56	400	7.44
854	4.70	500	6.36
		600	5.80
		700	5.42
		800	4.97
		1000	(4.10)

HORIZON; January 14, 1951; 1702 GCT; 29°47'N, 116°01'W; sounding, 350 fm; wind, 040°, force 2; weather, partly cloudy; sea, very rough; wire angle, 05°.

OBSERVED		INTERPOLATED	
0	15.07	0	15.07
10	15.10	10	15.10
25	14.64	20	14.72
50	11.56	30	14.10
74	10.72	50	11.56
98	10.14	75	10.69
151	9.92	100	10.12
199	9.68	150	9.93
246	9.01	200	9.67
293	8.90	250	9.01
347	8.10	300	8.86
395	7.70	400	7.67
444	7.30	500	(6.50)
495	6.52		

110.40

HORIZON; January 14, 1951; 2050 GCT; 29°38.5'N, 116°21'W; sounding, 1390 fm; wind, 320°, force 2; weather, clear; sea, rough; wire angle, 04°.

110.50

OBSERVED		INTERPOLATED	
0	15.72	0	15.72
10	15.50	10	15.50
25	15.46	20	15.48
51	12.42	30	15.44
74	10.94	50	13.25
100	10.19	75	10.87
219	9.35	100	10.19
338	8.24	150	9.55
448	7.23	200	9.48
588	6.09	250	9.09
796	4.90	300	8.64
994	4.14	400	7.67
1200	3.61	500	6.81
		600	6.00
		700	5.36
		800	4.87
		1000	4.12

HORIZON; January 15, 1951; 0354 GCT; 29°19'N, 117°04'W; sounding, 1750 fm; wind, 040°, force 3; weather, clear; sea, very rough; wire angle, 15°.

OBSERVED		INTERPOLATED	
0	15.36	0	15.36
10	15.30	10	15.30
24	15.20	20	15.20
48	14.83	30	15.19
71	12.79	50	14.71
93	11.28	75	12.50
139	10.05	100	11.06
182	9.07	150	9.80
268	7.78	200	8.71
359	7.43	250	7.98
447	6.80	300	7.61
542	5.84	400	7.18
734	5.03	500	6.24
926	4.36	600	5.52
1129	3.73	700	5.14
		800	4.84
		1000	4.10

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

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HORIZON; January 15, 1951; 0942, 1137 GCT; 28°56'N, 117°39'W; sounding, 3400 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 02°, 02°.

0	16.76	0	16.76
10	16.77	10	16.77
25	16.76	20	16.76
50	16.76	30	16.76
74	15.23	50	16.76
98	12.10	75	15.23
151	10.22	100	12.10
199	9.58	150	10.27
296	8.88	200	9.58
398	8.14	250	9.18
495	7.21	300	8.86
596	6.46	400	8.10
797	4.77	500	7.18
995	4.18	600	6.44
1199	3.68	700	5.64
		800	4.75
606a)	6.48	1000	4.14
994	4.14	1200	3.68
1190	3.68	1500	2.87
1491	2.88	2000	2.14
1742	2.44	2500	1.82
1999	2.14	3000	1.65
2224	1.93		
2511	1.81		
2777	1.70		
3089	1.62		

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

110.60

HORIZON; January 15, 1951; 1735 GCT; 28°41'N, 118°20'W; sounding, 1350 fm; wind, 330°, force 3; weather, clear; sea, rough; wire angle, 28°.

110.70

0	16.26	0	16.26
9	16.29	10	16.29
22	16.24	20	16.24
48	16.20	30	16.22
70	14.09	50	16.20
94	12.42	75	13.55
138	9.98	100	12.15
181	8.88	150	9.55
266	8.26	200	8.71
359	7.38	250	8.39
448	6.62	300	7.94
541	5.96	400	7.01
727	5.00	500	6.24
923	4.36	600	5.60
1123	3.72	700	5.11
		800	4.78
		1000	4.08

HORIZON; January 15, 1951; 2317 GCT; 28°17.5'N, 118°56.5'W; sounding, 2150 fm; wind, 360°, force 2; weather, cloudy; sea, rough; wire angle, 10°.

0	17.26	0	17.26
10	17.25	10	17.25
24	17.14	20	17.16
49	17.18	30	17.15
74	13.46	50	17.17
98	12.10	75	13.40
152	9.68	100	12.02
199	9.06	150	9.72
293	8.05	200	9.05
393	7.46	250	8.44
488	6.48	300	8.01
588	5.72	400	7.41
788	4.66	500	6.37
986	4.05	600	5.64
1192	3.56	700	5.06
		800	4.61
		1000	4.01

110.80

HORIZON; January 16, 1951; 0509 GCT; 27°56.5'N, 119°38'W; sounding, 1120 fm; wind, 310°, force 2; weather, cloudy; sea, rough; wire angle, 07°.

110.90

0	17.22	0	17.22
10	17.23	10	17.23
25	17.18	20	17.20
49	17.14	30	17.16
73	11.96	50	17.14
97	10.58	75	11.67
146	9.83	100	10.51
191	9.04	150	9.79
283	7.52	200	8.88
381	6.84	250	7.97
478	6.34	300	7.33
582	5.72	400	6.77
		500	6.20
		600	(5.60)

a) Overlapping casts; reconciliation of temperature curve when necessary.

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OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

110.100

HORIZON; January 16, 1951; 1138 GCT; 27°38.5'N, 120°22'W; sounding, 2200 fm; wind, 310°, force 3; weather, cloudy; sea, rough; wire angle, 10°.

113.35

0	17.13	0	17.13
10	17.15	10	17.15
25	17.13	20	17.14
49	17.14	30	17.14
73	11.86	50	17.14
95	10.51	75	11.68
142	9.52	100	10.45
182	9.11	150	9.43
264	8.07	200	8.88
353	7.20	250	8.23
439	6.30	300	7.74
532	5.83	400	6.64
		500	5.95

HORIZON; January 12, 1951; 1058 GCT; 29°12'N, 115°39'W; sounding, 540 fm; wind, 320°, force 7; weather, squalls; sea, high; wire angle, 48°.

0	15.02	0	15.02
8	15.03	10	15.02
18	15.00	20	14.99
34	14.98	30	14.98
51	13.75	50	14.05
68	12.40		

113.40

HORIZON; January 12, 1951; 0643 GCT; 29°02'N, 115°58.5'W; sounding, 1050 fm; wind, 310°, force 4; weather, clear; sea, very rough; wire angle, 25°.

113.50

0	16.65	0	16.65
9	16.66	10	16.66
23	16.64	20	16.64
46	16.64	30	16.63
68	13.47	50	16.64
90	11.94	75	12.84
136	10.57	100	11.18
177	10.90	150	10.65
260	10.50	200	10.87
348	9.03	250	10.58
434	7.59	300	10.00
526	6.78	400	7.99
711	5.48	500	7.00
899	4.63	600	6.19
1100	3.84	700	5.54
		800	5.05
		1000	4.23

HORIZON; January 12, 1951; 0006 GCT; 28°42'N, 116°37.5'W; sounding, 1700 fm; wind, 310°, force 4; weather, partly cloudy; sea, very rough; wire angle, 05°.

0	16.17	0	16.17
10	16.20	10	16.20
25	16.17	20	16.18
50	13.90	30	16.15
74	11.74	50	13.90
99	10.88	75	11.74
153	9.44	100	10.86
201	9.51	150	9.47
297	8.76	200	9.51
396	7.71	250	9.17
491	6.92	300	8.73
593	6.02	400	7.68
796	4.92	500	6.85
994	4.20	600	5.98
1204	3.56	700	5.32
		800	4.90
		1000	4.18

113.60

HORIZON; January 11, 1951; 1735 GCT; 28°22'N, 117°16.5'W; sounding, 1800 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 29°.

113.70

0	15.72	0	15.72
9	15.75	10	15.75
22	15.73	20	15.74
49	15.72	30	15.73
70	15.33	50	15.72
95	11.86	75	14.55
138	10.21	100	11.20
181	10.08	150	10.17
267	9.04	200	9.94
358	8.04	250	9.32
446	7.54	300	8.58
538	6.72	400	7.78
728	5.32	500	7.10
925	4.28	600	6.25
1122	3.78	700	5.51
		800	4.85
		1000	4.04

HORIZON; January 11, 1951; 1124 GCT; 28°02'N, 117°55.5'W; sounding, 1800 fm; wind, 290°, force 4; weather, clear; sea, very rough; wire angle, 39°.

0	17.00	0	17.00
8	17.02	10	17.02
20	16.98	20	16.98
39	16.66	30	16.77
59	15.42	50	16.64
78	13.03	75	13.33
119	11.06	100	11.74
156	10.50	150	10.56
230	9.20	200	9.69
309	8.50	250	9.01
383	7.83	300	8.58
462	7.04	400	7.65
624	5.71	500	6.68
798	4.88	600	5.88
990	4.28	700	5.29
		800	4.87
		1000	(4.25)

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

HORIZON; January 10, 1951; 0535 GCT; 28°39'N, 115°17'W; sounding, 125 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 15°.

0	15.19	0	15.19
10	15.20	10	15.20
25	14.72	20	15.04
50	11.64	30	14.25
74	11.27	50	11.64
99	10.34	75	11.27
152	9.93	100	10.30
202	9.42	150	9.90
		200	9.43

HORIZON; January 10, 1951; 1633 GCT; 28°15'N, 116°21'W; sounding, 1970 fm; wind, 350°, force 3; weather, cloudy; sea, rough; wire angle, 05°.

0	17.02	0	17.02
10	17.02	10	17.02
25	16.95	20	16.97
54	15.68	30	16.70
78	13.05	50	15.78
107	11.40	75	13.50
158	9.85	100	11.68
210	9.89	150	9.93
314	9.08	200	9.86
423	7.78	250	9.79
528	6.51	300	9.26
635	5.76	400	8.10
843	4.78	500	6.77
1053	3.98	600	5.97
1255	3.50	700	5.39
		800	4.95
		1000	4.17

HORIZON; January 11, 1951; 0444 GCT; 27°28'N, 117°38'W; sounding, 1850 fm; wind, 290°, force 3; weather, clear; sea, high; wire angle, 02°.

0	16.80	0	16.80
10	16.82	10	16.82
25	16.78	20	16.81
50	16.63	30	16.77
74	14.47	50	16.63
98	11.92	75	14.36
150	10.01	100	11.75
198	9.57	150	10.01
293	9.00	200	9.55
394	7.85	250	9.24
491	6.69	300	8.95
593	5.79	400	7.76
794	4.60	500	6.60
991	4.00	600	5.74
1195	3.46	700	5.06
		800	4.57
		1000	3.98

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

HORIZON; January 10, 1951; 1002 GCT; 28°32.5'N, 115°38.5'W; sounding, 230 fm; wind, 270°, force 4; weather, clear; sea, rough; wire angle, 12°. 117.35

0	15.40	0	15.40
10	15.42	10	15.42
25	15.38	20	15.42
49	14.44	30	15.30
73	11.94	50	14.30
102	11.12	75	11.93
150	10.03	100	11.17
		150	10.03

HORIZON; January 10, 1951; 2238 GCT; 27°48'N, 116°54.5'W; sounding, 1720 fm; wind, 300°, force 5; weather, overcast; sea, very rough; wire angle, 12°. 117.50 117.60

0	17.04	0	17.04
10	17.06	10	17.06
24	16.98	20	16.98
49	16.94	30	16.96
74	14.05	50	16.88
97	12.48	75	13.95
150	11.47	100	12.40
197	11.07	150	11.47
291	10.44	200	11.06
390	8.79	250	10.77
486	7.52	300	10.35
587	5.90	400	8.58
788	5.10	500	7.24
987	4.20	600	5.87
1192	3.61	700	5.52
		800	5.05
		1000	5.05

HORIZON; January 19, 1951; 1010 GCT; 28°03'N, 114°54'W; sounding, 45 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 15°. 117.70 120.35

0	16.12	0	16.12
10	16.14	10	16.14
24	15.96	20	16.05
48	15.32	30	15.81
72	12.04	50	15.30
		75	(11.99)

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OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

120.45

HORIZON; January 19, 1951; 0426 GCT; 27°43.5'N, 115°34.5'W; sounding, 1590 fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 15°.

120.50

0	15.99	0	15.99
10	16.01	10	16.01
24	15.99	20	16.00
53	15.94	30	16.00
78	12.42	50	15.95
105	11.98	75	12.60
156	10.83	100	12.03
206	10.31	150	10.97
309	8.91	200	10.36
416	7.34	250	9.76
521	6.39	300	9.04
627	5.98	400	7.60
838	4.78	500	6.53
1050	4.07	600	6.07
1253	3.52	700	5.68
		800	5.05
		1000	4.22

HORIZON; January 18, 1951; 2339 GCT; 27°35'N, 115°57.5'W; sounding, 2100 fm; wind, 360°, force 5; weather, cloudy; sea, very rough; wire angle, 18°.

0	15.84	0	15.84
10	15.87	10	15.87
29	15.60	20	15.75
57	13.10	30	15.60
85	11.29	50	15.48
112	10.14	75	11.84
166	10.24	100	10.29
219	9.81	150	10.21
322	8.48	200	10.03
424	7.10	250	9.42
530	6.31	300	8.78
634	5.64	400	7.44
845	4.52	500	6.51
1073	3.86	600	5.86
1283	3.39	700	5.30
		800	4.77
		1000	4.03

120.60

HORIZON; January 18, 1951; 1729 GCT; 27°19'N, 116°38.5'W; sounding, 2250 fm; wind, 360°, force 6; weather, squalls; sea, very rough; wire angle, 45°.

120.70

0	16.10	0	16.10
8	16.10	10	16.09
22	15.99	20	15.99
44	15.90	30	15.97
63	14.86	50	15.96
83	13.02	75	13.70
120	12.70	100	12.87
158	10.95	150	11.15
232	9.79	200	10.25
306	8.80	250	9.54
388	7.31	300	8.89
470	6.62	400	7.20
642	5.77	500	6.47
823	4.73	600	6.06
1022	4.07	700	5.42
		800	4.85
		1000	4.12

HORIZON; January 18, 1951; 1055 GCT; 26°59'N, 117°11.5'W; sounding, 1800 fm; wind, 360°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°.

0	16.54	0	16.54
10	16.56	10	16.56
24	16.53	20	16.55
47	16.56	30	16.55
72	13.94	50	16.56
94	13.46	75	13.89
144	10.74	100	12.68
189	10.07	150	10.63
279	9.28	200	9.99
375	7.87	250	9.60
465	6.73	300	9.00
573	5.90	400	7.50
757	4.96	500	6.43
951	4.21	600	5.74
1157	3.68	700	5.21
		800	4.81
		1000	4.07

120.80

HORIZON; January 18, 1951; 0500 GCT; 26°39'N, 117°45'W; sounding, 2200 fm; wind, 360°, force 4; weather, cloudy; sea, very rough; wire angle, 15°.

120.90

0	17.78	0	17.78
10	17.80	10	17.80
23	17.75	20	17.76
48	16.76	30	17.55
72	14.05	50	16.61
96	12.54	75	13.67
148	9.94	100	12.40
193	8.90	150	9.88
282	7.60	200	8.75
377	6.70	250	7.99
469	6.30	300	7.38
566	5.74	400	6.62
761	4.80	500	6.12
956	4.04	600	5.58
1160	3.78	700	5.09
		800	4.62
		1000	3.94

HORIZON; January 17, 1951; 2257 GCT; 26°19'N, 118°20'W; sounding, 2200 fm; wind, 020°, force 4; weather, cloudy; sea, high; wire angle, 06°.

0	17.22	0	17.22
10	17.23	10	17.23
25	17.16	20	17.18
49	15.62	30	17.14
74	14.42	50	15.62
97	13.62	75	14.39
147	11.47	100	13.55
191	9.33	150	11.18
281	8.24	200	9.18
375	6.94	250	8.53
467	6.24	300	8.04
565	5.70	400	6.70
758	4.76	500	6.07
952	4.20	600	5.48
1155	3.56	700	4.96
		800	4.67
		1000	4.04

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

HORIZON; January 17, 1951; 1549 GCT; 25°56.5'N, 118°54.5'W; sounding, 2200 fm; wind, 360°, force 3; weather, light fog; sea, high; wire angle, 18°.

0	18.27	0	18.27
9	18.28	10	18.27
24	18.23	20	18.23
52	18.29	30	18.25
75	18.25	50	18.29
103	14.28	75	18.25
154	10.98	100	14.52
206	10.38	150	11.08
308	9.42	200	10.43
415	8.22	250	10.03
520	6.93	300	9.52
623	6.06	400	8.38
826	4.91	500	7.15
1035	4.18	600	6.20
1233	3.60	700	5.56
		800	5.02
		1000	4.30

HORIZON; January 19, 1951; 1748 GCT; 27°16.5'N, 114°55'W; sounding, 145 fm; wind, 330°, force 4; weather, squalls; sea, rough; wire angle, 02°.

0	16.28	0	16.28
10	16.26	10	16.26
26	15.91	20	15.93
51	12.12	30	15.87
75	11.53	50	12.40
99	10.85	75	11.53
197	10.71	100	10.84
246	9.94	150	11.34
293	9.40	200	10.67
346	8.42	250	9.88
394	8.05	300	9.32
444	7.60	400	8.00
493	7.22	500	7.18
597	6.52	600	(6.50)

HORIZON; January 20, 1951; 0442 GCT; 26°36.5'N, 116°09.5'W; sounding, 2050 fm; wind, 340°, force 5; weather, partly cloudy; sea, rough; wire angle, 20°.

0	17.36	0	17.36
10	17.38	10	17.38
24	17.33	20	17.35
53	15.98	30	17.31
76	12.42	50	16.25
104	10.66	75	12.65
155	9.49	100	10.88
203	9.08	150	0.58
302	8.34	200	9.10
406	7.62	250	8.74
506	6.32	300	8.36
607	5.58	400	7.66
811	4.60	500	6.42
1016	3.98	600	5.61
1219	3.46	700	5.12
		800	4.65
		1000	4.03

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

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HORIZON; January 17, 1951; 0930 GCT; 25°38'N, 119°35'W; sounding, 2230 fm; wind, 100°, force 5; weather, partly cloudy; sea, high; wire angle, 10°. 120.100 120.110

0	18.56	0	18.56
10	18.57	10	18.57
25	18.51	20	18.54
54	18.57	30	18.52
78	15.64	50	18.57
106	13.04	75	16.35
158	10.78	100	13.52
210	10.98	150	10.81
314	10.45	200	10.93
424	8.88	250	10.99
529	7.58	300	10.60
637	6.44	400	9.30
849	4.96	500	7.88
1064	4.14	600	6.82
1271	3.57	700	5.88
		800	5.19
		1000	4.34

HORIZON; January 19, 1951; 2333 GCT; 26°55.5'N, 115°34'W; sounding, 1800 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 26°. 123.40 123.50

0	16.98	0	16.98
10	17.00	10	17.00
23	16.93	20	16.95
46	15.18	30	16.92
67	12.18	50	14.25
89	11.00	75	11.71
136	9.60	100	10.58
178	9.20	150	9.35
263	9.59	200	9.26
355	8.50	250	9.26
443	7.60	300	9.26
538	6.64	400	8.00
724	5.37	500	7.04
922	4.31	600	6.17
1120	3.75	700	5.52
		800	4.97
		1000	4.02

HORIZON; January 20, 1951; 2332 GCT; 26°43.5'N, 114°29'W; sounding, 1550 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 25°. 123.60 127.40

0	17.58	0	17.58
9	17.60	10	17.60
22	17.56	20	17.56
50	15.21	30	17.54
72	12.65	50	15.21
99	11.98	75	12.54
149	10.38	100	11.95
198	10.20	150	10.38
297	9.47	200	10.19
401	8.51	250	9.88
503	7.01	300	9.42
605	6.10	400	8.53
809	5.02	500	7.05
1019	4.16	600	6.14
1222	3.60	700	5.56
		800	5.05
		1000	4.24

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OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

127.50

HORIZON; January 20, 1951; 1711 GCT; 26°14'N, 115°09'W; sounding, 1775 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 25°.

127.60

0	17.40	0	17.40
10	17.41	10	17.41
23	17.36	20	17.37
51	12.90	30	17.10
73	11.76	50	13.05
100	11.92	75	11.76
		100	11.92

130.35

HORIZON; January 21, 1951; 0546 GCT; 26°19'N, 113°48.5'W; sounding, 200 fm; wind, 340°, force 5; weather, partly cloudy; sea, rough; wire angle, 35°.

130.40

0	17.69	0	17.69
9	17.70	10	17.70
21	17.67	20	17.67
41	17.70	30	17.69
61	14.69	50	17.68
79	12.32	75	12.88
121	10.99	100	11.42
160	10.71	150	10.76
205	10.68	200	10.67

130.50

HORIZON; January 21, 1951; 1530 GCT; 25°49.5'N, 114°49.5'W; sounding, 2050 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°.

130.60

0	17.76	0	17.76
10	17.76	10	17.76
24	17.73	20	17.74
52	17.74	30	17.73
76	12.88	50	17.74
102	11.38	75	13.15
148	10.17	100	11.48
193	9.97	150	10.15
284	9.46	200	9.95
397	8.00	250	9.70
472	7.12	300	9.31
567	6.35	400	7.96
763	5.12	500	6.87
970	4.23	600	6.10
1165	3.68	700	5.47
		800	4.94
		1000	4.13

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

HORIZON; January 20, 1951; 1105 GCT; 26°04'N, 115°47'W; sounding, 2020 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 30°.

0	17.08	0	17.08
9	17.08	10	17.08
22	17.06	20	17.06
48	17.00	30	17.03
69	13.87	50	16.95
94	11.91	75	13.20
		100	(11.68)

HORIZON; January 21, 1951; 0931 GCT; 26°09'N, 114°08'W; sounding, 1250 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 22°.

0	17.66	0	17.66
10	17.68	10	17.68
23	17.64	20	17.66
51	17.22	30	17.64
74	12.56	50	17.25
100	11.36	75	12.56
151	10.30	100	11.36
201	10.21	150	10.31
301	9.35	200	10.21
409	7.84	250	9.91
512	6.83	300	9.36
617	5.82	400	7.98
822	4.85	500	6.95
1029	4.08	600	6.00
1232	3.52	700	5.38
		800	4.94
		1000	4.20

HORIZON; January 21, 1951; 2121 GCT; 25°30'N, 115°28.5'W; sounding, 2100 fm; wind, 340°, force 4; weather, cloudy; sea, high; wire angle, 18°.

0	17.30	0	17.30
10	17.29	10	17.29
24	17.22	20	17.25
49	17.20	30	17.21
71	17.20	50	17.20
91	17.24	75	17.21
127	11.97	100	15.90
162	10.38	150	10.49
237	10.14	200	10.22
317	9.33	250	10.08
396	8.14	300	9.58
481	7.32	400	8.10
650	5.67	500	7.13
830	4.82	600	6.17
1027	4.12	700	5.38
		800	4.94
		1000	4.21

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

HORIZON; January 22, 1951; 0309 GCT; 25°08'N, 116°09'W; sounding, 2030 fm; wind, 350°, force 5; weather, partly cloudy; sea, high; wire angle, 32°.

0	18.04	0	18.04
9	18.04	10	18.04
21	18.00	20	18.01
47	18.04	30	18.02
68	17.95	50	18.04
93	14.56	75	17.92
137	11.72	100	14.05
180	10.60	150	11.26
265	9.47	200	10.28
358	8.47	250	9.64
448	7.54	300	9.07
541	6.70	400	8.03
		500	7.08

HORIZON; January 23, 1951; 1310 GCT; 25°53'N, 113°08'W; sounding, 105 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°.

0	17.98	0	17.98
10	18.00	10	18.00
25	17.96	20	17.97
49	16.18	30	17.95
74	13.49	50	16.15
98	11.99	75	13.35
152	11.75	100	11.97
		150	11.77

HORIZON; January 23, 1951; 0107 GCT; 25°17.5'N, 114°15.5'W; sounding, 1870 fm; wind, 330°, force 5; weather, cloudy; sea, rough; wire angle, 25°.

0	17.31	0	17.31
9	17.30	10	17.29
22	17.24	20	17.26
49	17.10	30	17.21
72	13.05	50	17.08
98	12.20	75	12.80
148	12.04	100	12.19
198	11.47	150	12.03
295	9.94	200	11.45
399	8.41	250	10.65
498	7.20	300	9.88
599	6.35	400	8.40
797	5.18	500	7.18
1000	4.32	600	6.34
1200	3.68	700	5.70
		800	5.16
		1000	4.32

OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

HORIZON; January 22, 1951; 0830 GCT; 24°47.5'N, 116°40'W; sounding, 2150 fm; wind, 360°, force 5; weather, partly cloudy; sea, very rough; wire angle, 25°. 130.70 130.80

0	17.98	0	17.98
9	17.99	10	17.99
22	17.94	20	17.96
50	17.98	30	17.95
72	17.96	50	17.98
99	14.60	75	17.96
146	11.55	100	14.57
191	10.45	150	11.43
281	9.22	200	10.31
380	8.29	250	9.58
474	7.39	300	9.03
567	6.56	400	8.11
760	5.23	500	7.15
960	4.32	600	6.30
1159	3.75	700	5.62
		800	5.01
		1000	4.18

HORIZON; January 23, 1951; 0802 GCT; 25°36'N, 113°43'W; sounding, 1600 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 10°. 133.30 133.40

0	17.89	0	17.89
10	17.90	10	17.90
25	17.91	20	17.91
49	17.36	30	17.88
74	13.67	50	17.35
97	12.60	75	13.65
149	12.22	100	12.55
196	11.84	150	12.21
290	10.02	200	11.80
391	8.57	250	10.86
487	7.42	300	9.85
588	6.52	400	8.47
788	5.20	500	7.35
985	4.32	600	6.42
1189	3.68	700	5.76
		800	5.13
		1000	4.27

HORIZON; January 22, 1951; 1923 GCT; 24°55'N, 115°02'W; sounding, 2150 fm; wind, 350°, force 3; weather, partly cloudy; sea, rough; wire angle, 30°. 133.50 133.60

0	17.36	0	17.36
9	17.36	10	17.35
21	17.30	20	17.30
44	17.30	30	17.30
63	17.40	50	17.33
83	16.78	75	17.34
122	11.86	100	12.18
156	11.44	150	11.51
226	10.76	200	11.00
299	9.86	250	10.50
374	8.84	300	9.85
450	7.80	400	8.48
606	6.26	500	7.26
769	5.12	600	6.32
951	4.40	700	5.58
		800	4.93
		1000	(4.25)

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OBSERVED		INTERPOLATED	
Z m	T °C	Z m	T °C

137.35

HORIZON; January 23, 1951; 1939 GCT; 25°06.5'N, 113°07'W; sounding, 310 fm; wind, 310°, force 3; weather, cloudy; sea, rough; wire angle, 02°.

0	18.16	0	18.16
10	18.05	10	18.05
25	17.61	20	17.65
49	16.88	30	17.61
72	14.10	50	16.87
95	13.02	75	13.85
142	12.13	100	12.90
181	11.25	150	11.95
223	10.71	200	10.98
265	10.03	250	10.26
313	9.43	300	9.58
359	8.65	400	8.21
410	8.14		

137.40

HORIZON; January 23, 1951; 2357 GCT; 24°55.5'N, 113°33.5'W; sounding, 160 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 16°.

0	18.46	0	18.46
10	18.31	10	18.31
25	18.21	20	18.23
49	18.16	30	18.18
72	13.57	50	18.15
95	12.93	75	13.43
145	12.21	100	12.85
189	11.75	150	12.15
277	9.96	200	11.59
374	8.95	250	10.45
468	7.67	300	9.71
567	6.70	400	8.67
665	5.87	500	7.33
768	5.28	600	6.42
965	4.44	700	5.65
		800	5.13
		1000	(4.32)

137.50

HORIZON; January 24, 1951; 0404 GCT; 24°39'N, 114°07'W; sounding, 1900 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 13°.

137.60

0	19.78	0	19.78
10	19.80	10	19.80
24	18.78	20	19.49
48	17.66	30	18.38
72	13.86	50	17.59
96	12.94	75	13.60
146	11.64	100	12.82
193	10.92	150	11.56
284	10.04	200	10.84
382	8.43	250	10.34
477	7.40	300	9.88
577	6.54	400	8.20
776	5.24	500	7.19
971	4.30	600	6.37
1174	3.72	700	5.70
		800	5.12
		1000	4.20

HORIZON; January 24, 1951; 1111 GCT; 24°19.5'N, 114°46.5'W; sounding, 2050 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 15°.

0	19.82	0	19.82
10	19.82	10	19.82
24	19.72	20	19.74
48	19.78	30	19.73
72	14.22	50	19.78
97	12.72	75	13.80
		100	(12.65)

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m
BLACK DOUGLAS; February 25, 1951; 1017 GCT; 34°19'N, 120°48'W; sounding, 450 fm; wind, 330°, force 4; weather, clear; sea, rough; wire angle, 23°.												80.55
0	12.46	33.24	5.89	0.54	0	12.46	33.24	5.89	0.54	25.16	282	0.00
9	12.45	33.31	6.01	0.51	10	12.45	33.31	6.02	0.51	25.21	277	0.03
23	12.46	33.30	5.99	0.57	20	12.45	33.30	6.01	0.52	25.20	278	0.06
46	11.58	33.37	5.40	0.90	30	12.42	33.31	5.93	0.64	25.22	277	0.08
68	9.89	33.45	4.41	1.36	50	11.10	33.38	5.19	0.95	25.52	248	0.14
91	9.64	33.64	3.88	1.53	75	9.78	33.49	4.25	1.43	25.83	219	0.19
139	8.76	33.96	2.89	-	100	9.53	33.71	3.80	1.57	26.04	199	0.25
180	8.37	34.09	2.19	2.08	150	8.67	34.03	2.59	2.00	26.43	163	0.34
203	7.78	34.09	2.06	2.16	200	7.81	34.09	2.09	2.15	26.62	146	0.42
262	7.44	34.11	1.66	2.33	250	7.52	34.11	1.75	2.24	26.67	142	0.49
308	7.24	34.16	1.27	-	300	7.27	34.15	1.36		26.73	137	0.56
350	7.14	34.25	0.78	-								
BLACK DOUGLAS; February 24, 1951; 1620 GCT; 34°09'N, 121°09'W; sounding, 1280 fm; wind, 090°, force 3; weather, partly cloudy; sea, rough; wire angle, 12°.												80.60
0	13.12	33.08	5.43	0.47	0	13.12	33.08	5.43	0.47	24.91	306	0.00
10	13.12	33.08	5.43	0.49	10	13.12	33.08	5.43	0.49	24.90	306	0.03
25	13.04	33.06	5.40	0.51	20	13.09	33.07	5.40	0.50	24.90	306	0.06
50	12.34	33.48	5.44	0.65	30	12.77	33.06	5.41	0.52	24.96	302	0.09
74	10.58	33.39	4.12	1.21	50	12.34	33.48	5.44	0.65	25.37	263	0.15
98	9.35	33.55	3.50	1.50	75	10.50	33.39	4.09	1.22	25.63	238	0.21
149	8.58	33.91	2.51	1.83	100	9.32	33.57	3.44	1.51	25.96	207	0.27
195	8.03	34.05	2.35	2.01	150	8.58	33.91	2.50	1.83	26.35	171	0.36
290	7.18	34.18	1.40	2.42	200	7.99	34.06	2.33	2.02	26.56	152	0.44
389	6.71	34.29	0.87	2.68	250	7.64	34.13	1.68	2.22	26.66	143	0.52
483	6.16	-	0.43	2.78	300	7.12	34.19	1.38	2.45	26.79	132	0.58
584	5.78	34.36	0.39	2.87	400	6.65	34.30	0.80	2.70	26.94	119	0.71
781	4.64	34.47	0.40	2.88	500	6.08	34.34	0.40	2.80	27.04	109	0.82
986	3.99	34.54	0.59	2.82	600	5.70	34.37	0.40	2.87	27.11	104	0.93
					700	5.15	34.42	0.40	2.88	27.22	94	1.03
					800	4.54	34.48	0.40	2.88	27.34	83	1.12
					1000	(3.95)	(34.54)	(0.61)	(2.81)	(27.45)	(73)	(1.27)
BLACK DOUGLAS; February 24, 1951; 0504, 0532, 0725 GCT; 33°49'N, 121°51'W; sounding, 2040 fm; wind, 230°, force 3; weather, cloudy; sea, very rough; wire angle, 08°, 10°, 09°.												80.70
0	14.62	33.12	4.95	0.40	0	14.62	33.12	4.95	0.40	24.63	332	0.00
10	14.64	33.11	5.17	0.36	10	14.64	33.11	5.17	0.36	24.61	334	0.03
25	14.62	33.09	5.18	0.37	20	14.63	33.10	5.19	0.36	24.61	334	0.07
51	14.61	33.10	4.64u	0.35	30	14.61	33.08	5.20	0.37	24.60	336	0.10
75	13.30	33.08	5.22	0.48	50	14.61	33.10	5.21	0.35	24.61	335	0.17
98	10.68	33.13	4.11	-	75	13.30	33.08	5.22	0.48	24.87	311	0.25
151	9.04	33.78	2.83	-	100	10.57	33.13	4.10	(0.66)	25.42	259	0.32
198	8.30	33.93	2.50	-	150	9.07	33.78	2.87	(1.00)	26.17	188	0.43
292	7.00	34.07	2.07	1.78	200	8.28	33.93	2.50	(1.32)	26.41	166	0.52
390	6.01	34.18	1.00	2.11	250	7.57	34.02	2.27	(1.59)	26.59	150	0.60
485	5.55	34.25	0.53	-	300	6.90	34.08	2.00	1.81	26.73	137	0.67
586	5.28	34.36	0.37	2.83	400	5.92	34.18	0.94	2.15	26.94	118	0.80
					500	5.50	34.27	0.49	2.68	27.06	107	0.91
791	4.38	34.43	0.36	2.89	600	5.24	34.37	0.36	2.84	27.17	98	1.01
991	3.77	34.47	0.54	-	700	4.83	34.43	0.36	2.88	27.26	89	1.11
1194	3.34	34.52	0.88	-	800	4.34	34.42	0.36	2.89	27.31	85	1.19
					1000	3.75	34.47	0.56	2.95	27.41	76	1.35
492a)	5.58	34.25	0.63	2.77	1200	3.32	34.52	0.82	2.92	27.49	69	1.50
874	4.15	34.40	0.46	2.95	1500	2.75	34.61	1.05	2.87	27.62	58	1.69
1064	3.60	34.49	0.68	2.94	2000	2.09	34.65	1.56		27.71	49	1.96
1356	3.00	34.61	0.85	-	2500	1.82	34.65	2.33		27.73	48	2.20
1594	2.60	34.61	1.22	2.85								
1839	2.28	34.65	1.41	2.79								
2086	2.02	34.65	1.66	-								
2337	1.91	34.65	2.09	-								
2601	1.75	34.65	-	-								
2900	1.66	34.60	2.51	-								

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

80.80 BLACK DOUGLAS; February 23, 1951; 2317 GCT; 33°29'N, 122°32'W; sounding, 2240 fm; wind, 280°, force 3; weather, cloudy; sea, very rough; wire angle, 15°.

0	14.42	32.99	5.30	0.42	0	14.42	32.99	5.30	0.42	24.57	338	0.00
10	14.42	32.99	5.44	0.42	10	14.42	32.99	5.44	0.42	24.57	338	0.03
24	14.40	33.03	5.40	0.45	20	14.40	33.02	5.43	0.44	24.60	336	0.07
48	12.94	32.86	5.35	-	30	14.40	33.02	5.39	0.47	24.60	336	0.10
72	11.27	33.01	5.10	0.85	50	12.87	32.86	5.34	0.55	24.78	318	0.17
96	10.31	33.32	4.35	1.21	75	11.05	33.10	5.00	0.90	25.31	269	0.24
147	8.60	33.66	3.72	1.58	100	10.12	33.35	4.28	1.24	25.67	235	0.30
192	8.43	34.05	2.28	1.93	150	8.57	33.71	3.68	1.60	26.20	186	0.41
281	7.14	34.04	1.62	2.34	200	8.39	34.05	2.18	1.98	26.49	159	0.49
378	5.93	34.08	1.25	2.54	250	7.68	34.04	1.80	2.24	26.59	150	0.57
468	5.32	34.27	0.70	2.78	300	6.83	34.04	1.53	2.38	26.71	139	0.64
565	4.97	34.38	0.45	2.84	400	5.75	34.12	1.15	2.59	26.91	120	0.77
755	4.24	34.44	0.43	-	500	5.19	34.32	0.59	2.80	27.14	100	0.88
943	3.78	34.49	0.51	2.86	600	4.81	34.39	0.45		27.24	91	0.98
					700	4.43	34.43	0.44		27.31	84	1.07
					800	4.09	34.45	0.44		27.36	80	1.15
					1000	(3.71)	(34.50)			(27.44)	(73)	(1.30)

80.90 BLACK DOUGLAS; February 23, 1951; 1704, 1755 GCT; 33°09'N, 123°13'W; sounding, 2340 fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 14°, 16°.

0	13.84	32.99	4.79	0.46	0	13.84	32.99	4.79	0.46	24.69	326	0.00
10	13.85	32.99	5.34	0.40	10	13.85	32.99	5.34	0.40	24.69	327	0.03
24	13.85	32.97	4.62	0.37	20	13.85	32.97	5.29	0.38	24.67	328	0.06
48	11.56	33.06	4.91	-	30	13.85	32.98	5.16	0.38	24.68	328	0.10
73	10.18	33.22	4.51	1.21	50	11.45	33.07	4.88	0.78	25.21	277	0.16
97	9.15	33.44	3.68	1.46	75	10.05	33.23	4.46	1.23	25.58	243	0.22
148	8.47	33.82	2.72	-	100	9.06	33.46	3.59	1.46	25.92	211	0.28
195	7.86	34.00	2.20	2.03	150	8.44	33.84	2.70	1.86	26.32	174	0.38
288	7.00	34.08	1.57	2.41	200	7.81	34.01	2.16	2.04	26.55	153	0.46
388	6.11	34.18	0.79	2.68	250	7.33	34.05	1.80	2.25	26.65	144	0.53
483	5.38	34.23	0.49	2.79	300	6.88	34.09	1.51	2.44	26.74	136	0.60
584	5.06	34.31	0.35	-	400	6.01	34.19	0.71	2.70	26.93	118	0.73
					500	5.29	34.24	0.45	(2.80)	27.06	107	0.84
767	4.30	34.38	0.41	2.89	600	4.97	34.32	0.35	(2.88)	27.14	100	0.94
963	3.76	34.47	0.54	2.80	700	4.57	34.35	0.38	(2.89)	27.22	93	1.04
1167	3.38	34.52	0.85	-	800	4.19	34.40	0.45	2.88	27.31	85	1.13
					1000	3.68	34.48	0.58	(2.77)	27.43	74	1.29

80.100 BLACK DOUGLAS; February 23, 1951; 0909 GCT; 32°49'N, 123°54'W; sounding, 2480 fm; wind, 300°, force 4; weather, cloudy; sea, high; wire angle, 15°.

0	13.58	33.05	5.48	0.43	0	13.58	33.05	5.48	0.43	24.79	317	0.00
10	13.60	33.03	5.53	0.42	10	13.60	33.03	5.53	0.42	24.77	319	0.03
24	13.60	33.04	5.75	0.39	20	13.60	33.04	5.72	0.40	24.78	318	0.06
49	11.32	33.19	5.42	0.85	30	13.60	33.06	5.74	0.39	24.79	317	0.10
73	9.96	33.28	4.87	1.18	50	11.32	33.20	5.38	0.85	25.34	266	0.15
96	9.20	33.53	4.04	1.48	75	9.88	33.29	4.84	1.20	25.66	236	0.22
147	8.48	33.84	2.94	1.82	100	9.12	33.57	3.89	1.52	26.00	203	0.27
192	8.00	34.00	2.54	-	150	8.44	33.85	2.91	(1.82)	26.33	173	0.36
283	7.08	34.14	1.63	2.39	200	7.92	34.02	2.46	(1.90)	26.54	154	0.45
379	6.26	34.18	0.92	2.44	250	7.42	34.11	1.98	(2.21)	26.68	141	0.52
471	5.68	34.29	0.69	2.78	300	6.94	34.15	1.46	2.41	26.78	132	0.59
569	4.94	34.27	0.44	2.90	400	6.11	34.20	0.86	2.47	26.93	119	0.71
766	4.32	34.45	0.69u	-	500	5.45	34.29	0.59	2.83	27.08	105	0.83
960	3.72	34.52	0.65	-	600	4.81	34.28			27.15	99	0.93
1163	3.32	34.56	0.89	-	700	4.50	34.38			27.26	89	1.02
					800	4.21	34.47			27.36	80	1.11
					1000	3.63	34.53			27.47	70	1.26

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m
BLACK DOUGLAS; February 23, 1951; 0204, 0244 GCT; 32°29'N, 124°34.5'W; sounding, 2200 fm; wind, 320°, force 6; weather, partly cloudy; sea, high; wire angle, 03°, 20°.												80.110
0	14.40	32.99	5.60	-	0	14.40	32.99	5.60		24.57	337	0.00
9	14.44	32.99	5.78	0.61	10	14.44	32.99	(5.78)	(0.61)	24.56	338	0.03
24	14.38	32.95	-	-	20	14.42	32.96	(5.77)	(0.61)	24.55	340	0.07
47	13.68	32.81	5.71	0.61	30	14.30	32.88	(5.77)	(0.61)	24.51	344	0.10
71	12.37	32.84	5.59	0.75	50	13.62	32.81	5.70	0.62	24.60	336	0.17
95	11.06	33.04	5.35	1.05	75	12.12	32.86	5.55	0.79	24.93	305	0.25
147	8.65	33.55	3.66	-	100	10.77	33.09	5.26	(1.14)	25.35	265	0.32
194	8.24	33.89	3.20	-	150	8.58	33.58	3.58		26.09	195	0.44
287	7.41	34.14	1.73	-	200	8.20	33.92	3.15		26.42	165	0.53
386	5.85	34.02	1.56	-	250	7.77	34.09	2.10		26.61	147	0.60
480	5.01	34.11	0.93	2.70	300	7.23	34.13	1.69		26.72	138	0.68
580	4.92	34.29	0.42	2.83	400	5.69	34.02	1.50		26.84	127	0.81
					500	4.96	34.14	0.77		27.02	110	0.93
776	4.31	34.34	0.41	-	600	4.88	34.30	0.42		27.16	98	1.03
971	3.72	34.49	0.69	-	700	4.59	34.33	0.41		27.21	94	1.13
1176	3.30	34.58	0.84	-	800	4.22	34.35	0.42		27.27	89	1.22
					1000	3.64	34.51	0.73		27.45	72	1.38
BLACK DOUGLAS; February 22, 1951; 1718 GCT; 32°09'N, 125°15.5'W; sounding, 2440 fm; wind, 320°, force 5; weather, cloudy; sea, high; wire angle, 14°.												80.120
0	15.74	33.21	5.61	0.35	0	15.74	33.21	5.61	0.35	24.45	349	0.00
10	15.74	33.21	5.63	0.35	10	15.74	33.21	5.63	0.35	24.45	349	0.04
24	15.74	33.28	5.82	0.33	20	15.75	33.27	5.80	0.33	24.49	345	0.07
53	15.86	33.28	5.71	0.31	30	15.76	33.29	5.82	0.32	24.51	344	0.10
78	14.72	33.31	5.83	0.35	50	15.84	33.28	5.74	0.31	24.48	347	0.17
105	12.25	33.17	5.68	0.58	75	15.08	33.31	5.81	0.34	24.67	330	0.26
155	9.38	33.31	4.88	1.23	100	12.75	33.18	5.74	0.50	25.05	294	0.34
204	8.62	33.84	4.03	1.48	150	9.66	33.27	4.98	1.19	25.68	235	0.47
303	7.28	34.00	2.96	1.81	200	8.67	33.82	4.09	1.46	26.27	180	0.57
406	6.13	34.07	1.48	2.42	250	8.04	33.95	3.50	1.64	26.46	162	0.66
507	5.46	34.20	0.81	2.66	300	7.33	33.99	2.98	1.80	26.60	149	0.74
608	5.26	34.36	0.41	2.83	400	6.17	34.06	1.57	2.41	26.81	130	0.87
810	4.41	34.38	0.42	2.89	500	5.50	34.19	0.82	2.64	27.00	113	1.00
1014	3.72	34.49	0.88	2.85	600	5.27	34.35	0.41	2.82	27.15	100	1.10
1216	3.28	34.47	0.96	-	700	4.93	34.37	0.41	2.87	27.21	95	1.20
					800	4.44	34.38	0.41	2.89	27.27	89	1.29
					1000	3.77	34.49	0.85	2.86	27.43	75	1.46
BLACK DOUGLAS; February 22, 1951; 0718, 0931 GCT; 31°49'N, 125°56'W; sounding, 2310 fm; wind, 330°, force 6; weather, cloudy; sea, high; wire angle, 20°, 18°.												80.130
0	16.42	33.35	4.95	-	0	16.42	33.35	4.95		24.40	353	0.00
9	16.42	33.39	5.03	0.37	10	16.42	33.39	5.04	0.37	24.43	351	0.04
24	16.43	33.37	5.36	0.39	20	16.43	33.38	5.34	0.38	24.42	352	0.07
53	16.44	33.37	5.31	0.41	30	16.43	33.37	5.37	0.39	24.42	353	0.11
75	16.44	33.37	5.13	0.36	50	16.44	33.37	5.32	0.41	24.42	354	0.18
103	16.41	33.35	4.96	0.38	75	16.44	33.37	5.13	0.36	24.41	355	0.26
					100	16.42	33.35	4.96	0.38	24.41	356	0.35
469	6.05	34.14	0.96	-								
837	4.30	34.34	0.43	2.85								
1021	3.76	34.45	0.66	2.84								
1307	3.13	34.49	0.95	2.76								
1544	2.71	34.60u	1.08	2.69								
1790	2.34	34.60	1.56	2.59								
					1000	3.80	34.45	0.61	2.85	27.40	77	
					1200	3.38	34.47	0.84	2.79	27.45	73	
					1500	2.79	34.55	1.04	2.70	27.57	62	

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
83.55	BLACK DOUGLAS; February 25, 1951; 0257 GCT; 33°44'N, 120°24.5'W; sounding, 650 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 22°.											
0	12.55	33.25	5.26	-	0	12.55	33.25	5.26		25.15	282	0.00
9	12.56	33.26a)	5.23	0.53	10	12.55	33.26	5.23	0.54	25.15	282	0.03
23	12.37	33.22a)	5.54	0.55	20	12.42	33.23	5.53	0.55	25.16	282	0.06
46	11.33	33.19a)	4.71	0.83	30	12.05	33.21	5.51	0.58	25.21	277	0.08
69	11.06	33.37	4.47	0.96	50	11.25	33.19	4.66	0.86	25.34	265	0.14
91	9.33	33.46	3.19	-	75	10.99	33.39	4.37	0.99	25.55	246	0.20
138	8.47	33.78	-	1.83	100	9.04	33.50	2.95	1.44	25.96	207	0.26
180	8.16	34.00	2.48	1.94	150	8.36	33.87	2.61	1.87	26.35	171	0.35
265	7.47	34.11	1.79	-	200	8.02	34.04	2.36	(1.99)	26.54	154	0.43
356	6.87	34.16	1.03	-	250	7.60	34.10	1.94	(2.16)	26.65	144	0.51
444	6.28	34.20	0.89	2.69	300	7.21	34.13	1.44	(2.36)	26.73	137	0.58
538	5.83	34.29	0.42	-	400	6.58	34.18	0.91	(2.65)	26.85	127	0.71
629	5.52	34.34	0.37	2.78	500	6.00	34.25	0.57	2.72	26.98	115	0.83
740	5.06	34.36	0.42	2.82	600	5.61	34.33	0.38	2.76	27.09	105	0.94
					700	5.23	34.36	0.40	2.81	27.16	99	1.04
83.60	BLACK DOUGLAS; February 24, 1951; 2254 GCT; 33°34'N, 120°45'W; sounding, 880 fm; wind, 090°, force 2; weather, cloudy; sea, rough; wire angle, 15°.											
0	13.18	33.22	5.93	-	0	13.18	33.22	5.93		25.00	296	0.00
10	13.04	33.26	6.01	-	10	13.04	33.26	6.01		25.06	292	0.03
24	12.59	33.33	6.09	0.58	20	12.71	33.31	6.07		25.16	282	0.06
48	11.68	33.42	5.64	-	30	12.38	33.36	6.10	0.63	25.26	272	0.09
73	11.20	33.42	5.35	0.98	50	11.64	33.43	5.61	0.86	25.46	254	0.14
97	9.54	33.35	4.24	1.44	75	11.17	33.42	5.34	0.99	25.54	247	0.20
149	8.38	33.87	2.96	-	100	9.40	33.35	4.07	(1.48)	25.78	224	0.26
195	7.92	34.02	2.46	-	150	8.38	33.87	2.95	(1.92)	26.35	171	0.36
289	7.04	34.13	1.77	2.30	200	7.89	34.03	2.42	(2.11)	26.55	153	0.44
386	6.31	34.18	0.88	2.64	250	7.44	34.10	2.05	(2.23)	26.67	142	0.51
480	5.82	34.31	-	-	300	6.93	34.14	1.67	2.33	26.77	133	0.58
578	5.32	34.34	0.37	2.89	400	6.25	34.19	0.81	2.67	26.90	121	0.71
771	4.61	34.38	0.42	2.90	500	5.73	34.32	0.48	2.83	27.07	106	0.82
961	4.04	34.45	0.59	2.85	600	5.22	34.35	0.37	2.89	27.16	99	0.92
1163	3.49	34.60	0.90	-	700	4.84	34.37	0.40	2.90	27.22	94	1.02
					800	4.50	34.39	0.45	2.90	27.27	89	1.11
					1000	3.94	34.48	0.65	(2.84)	27.40	78	1.28
87.35	BLACK DOUGLAS; February 18, 1951; 2030 GCT; 33°50'N, 118°37.5'W; sounding, 300 fm; wind, 270°, force 1; weather, cloudy; sea, rough; wire angle, 05°.											
0	13.76	33.41	4.90	0.47	0	13.76	33.41	4.90	0.47	25.03	294	0.00
10	13.50	33.35	5.78	0.48	10	13.50	33.35	5.78	0.48	25.03	294	0.03
26	13.36	33.32	5.91	0.49	20	13.40	33.33	5.88	0.49	25.04	293	0.06
50	10.62	-	5.90	1.21	30	13.15	33.32	5.92	0.50	25.08	290	0.09
74	9.98	33.66	4.52	1.58	50	10.62	33.39	5.90	1.21	25.61	240	0.14
99	9.66	33.77	3.12	1.76	75	9.97	33.66	4.50	1.59	25.93	210	0.15
150	9.26	34.04	2.32	-	100	9.65	33.77	3.11	(1.76)	26.07	197	0.25
198	8.68	34.11	2.24	-	150	9.26	34.04	2.32	(2.20)	26.35	172	0.34
245	8.48	34.22	1.58	2.39	200	8.67	34.11	2.24	(2.36)	26.49	158	0.42
293	8.12	34.22	1.33	2.59	250	8.45	34.22	1.55	2.40	26.61	148	0.50
346	7.45	34.22	0.94	-	300	8.03	34.22	1.28	(2.61)	26.68	142	0.57
394	6.94	-	0.71	-	400	6.89	34.26	0.69		26.87	125	0.70
443	6.61	34.30	0.63	-	500	6.34	34.33	0.41		27.00	114	0.82
492	6.37	-	0.43	-	600	(5.82)	(34.37)	(0.32)		(27.10)	(105)	(0.93)
599	5.82	34.37	0.32	-								

a) Salinity bottle numbers were not recorded on the data sheet. Since standard handling and titrating procedures were used, these salinity values are assumed to be listed in correct order.

OBSERVED					INTERPOLATED					COMPUTED			SIO CCOFI 5102
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m	
BLACK DOUGLAS; February 19, 1951; 0020 GCT; 33°40'N, 118°58.5'W; sounding, 500 fm; wind, 270°, force 5; weather, clear; sea, high; wire angle, 10°.													87.40
0	13.42	33.31	5.82	0.58	0	13.42	33.31	5.82	0.58	25.02	295	0.00	
10	13.41	-	5.91	-	10	13.41	33.31	5.91	0.53	25.03	294	0.03	
24	13.34	33.32	5.71	0.54	20	13.36	33.32	5.82	0.53	25.04	293	0.06	
49	10.64	33.40	4.43	1.20	30	13.27	33.33	5.45	0.58	25.07	291	0.09	
73	9.85	33.60	3.69	1.55	50	10.63	33.40	4.43	1.24	25.61	239	0.14	
98	9.52	33.78	3.17	1.64	75	9.83	33.61	3.65	1.56	25.92	211	0.20	
150	8.82	33.95	2.85	1.86	100	9.49	33.79	3.16	1.65	26.11	193	0.25	
194	8.71	34.16	1.91	2.08	150	8.82	33.95	2.85	1.86	26.35	172	0.34	
241	8.46	34.23	1.23	-	200	8.69	34.18	1.75	2.12	26.55	154	0.42	
286	7.78	34.23	1.15	2.55	250	8.35	34.23	1.20	2.46	26.64	146	0.50	
340	7.20	34.23	0.87	2.65	300	7.63	34.23	1.09	2.58	26.74	136	0.56	
386	6.82	34.25	0.71	2.79	400	6.73	34.26	0.66	2.80	26.89	123	0.69	
482	6.21	34.35	0.42	2.88	500	6.13	34.35	0.40	2.90	27.04	109	0.81	
593	5.73	34.35	0.31	2.94	600	5.69	34.35	0.31	2.94	27.10	105	0.92	
696	5.31	34.37	0.31	2.94	700	(5.30)	(34.37)	(0.33)	(2.94)	(27.16)	(100)	(1.02)	
BLACK DOUGLAS; February 18, 1951; 1353 GCT; 33°24.5'N, 117°55'W; sounding, 300 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 02°.													90.30
0	13.47	33.28	5.77	0.46	0	13.47	33.28	5.77	0.46	24.99	298	0.00	
10	13.50	33.24	4.80	0.43	10	13.50	33.24	4.80	0.43	24.95	302	0.03	
25	11.58	33.37	3.72	0.97	20	13.00	33.31	4.08	0.74	25.11	287	0.06	
49	10.81	33.57	3.34	1.39	30	11.33	33.42	3.56	1.10	25.51	249	0.09	
73	10.52	33.71	3.14	1.67	50	10.81	33.57	3.32	1.40	25.72	230	0.13	
97	9.97	34.00	2.30	1.69	75	10.50	33.74	3.11	1.67	25.90	212	0.19	
150	9.42	34.09	1.92	2.04	100	9.93	34.01	2.26	1.69	26.21	184	0.24	
198	8.91	34.16	1.46	2.11	150	9.42	34.09	1.92	2.04	26.36	170	0.33	
247	8.61	34.24	1.14	-	200	8.89	34.17	1.43	2.12	26.51	157	0.41	
295	8.33	34.25	1.02	2.44	250	8.60	34.24	1.14	2.39	26.61	149	0.49	
349	7.86	-	1.05	2.55	300	8.30	34.25	1.02	2.45	26.66	144	0.56	
398	7.20	34.26	0.80	2.67	400	7.19	34.26	(0.78)	(2.67)	26.83	129	0.70	
448	6.86	34.23	-	-									
BLACK DOUGLAS; February 19, 1951; 0625 GCT; 33°11'N, 118°23.5'W; sounding, 645 fm; wind, 280°, force 5; weather, clear; sea, very rough; wire angle, 12°.													90.37
0	13.61	33.27	5.83	0.46	0	13.61	33.27	5.83	0.46	24.95	301	0.00	
10	13.61	33.29	6.00	0.47	10	13.61	33.29	6.00	0.47	24.97	300	0.03	
25	13.60	33.27	5.67	0.50	20	13.60	33.27	5.80	0.49	24.95	302	0.06	
50	10.90	33.39	4.52	1.18	30	13.54	33.27	5.54	0.52	24.97	301	0.09	
74	9.98	33.57	3.93	-	50	10.90	33.39	4.52	1.18	25.56	244	0.14	
97	-	33.73	3.24	1.76	75	9.97	33.57	3.90	1.64	25.86	217	0.20	
147	8.50	33.95	2.77	1.91	100	9.38	33.74	3.19	1.77	26.09	195	0.25	
192	8.24	-	2.12	2.17	150	8.47	(33.96)	2.74	1.91	(26.41)	(166)	(0.34)	
284	7.50	34.14	1.17	-	200	8.19		2.02	(2.23)				
383	6.77	-	0.67	-	250	7.82		1.42	(2.40)				
474	6.09	34.28	0.39	2.86	300	7.36		1.09	(2.51)				
574	5.78	34.40	0.31	2.91	400	6.64		0.59	(2.81)				
670	5.29	-	0.21	2.95	500	5.98		0.37	2.87				
771	4.88	-	0.28	3.04	600	5.67		0.28	2.92				
973	4.26	-	0.51	3.07	700	5.15		0.21	2.98				
					800	4.79		0.32	3.04				
					1000	(4.20)		(0.55)	(3.07)				

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m
90.45	BLACK DOUGLAS; February 19, 1951; 1139 GCT; 32°54.5'N, 118°56'W; sounding, 950 fm; wind, 350°, force 4; weather, clear; sea, high; wire angle, 30°.											
0	12.96	33.32	5.56	0.54	0	12.96	33.32	5.56	0.54	25.12	285	0.00
9	12.95	33.68r	5.58	0.59	10	12.95	33.33	5.59	0.59	25.13	284	0.03
22	12.96	33.35	5.51	0.58	20	12.96	33.34	5.54	0.58	25.14	284	0.06
43	11.18	33.42	4.52	1.13	30	12.87	33.38	5.16	0.60	25.18	280	0.09
66	9.98	33.46	3.87	1.47	50	10.65	33.43	4.26	1.26	25.64	237	0.14
87	9.31	33.86	3.44	1.63	75	9.64	33.79	3.66	1.55	26.09	195	0.19
90.53	BLACK DOUGLAS; February 19, 1951; 1705 GCT; 32°38.5'N, 119°29'W; sounding, 450 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 09°.											
0	13.07	33.53	5.74	0.59	0	13.07	33.53	5.74	0.59	25.26	272	0.00
10	13.07	33.35	5.90	0.58	10	13.07	33.35	5.90	0.58	25.12	285	0.03
25	13.08	33.31	5.94	0.61	20	13.08	33.32	5.94	0.60	25.10	288	0.06
50	11.20	-	5.09	0.97	30	13.09	33.31	5.90	0.66	25.09	289	0.08
75	9.94	33.57	3.95	1.50	50	11.20	33.34	5.09	0.97	25.47	253	0.14
98	9.26	33.88	3.40	-	75	9.94	33.57	3.95	1.50	25.87	216	0.20
152	8.44	33.97	2.46	-	100	9.22	33.89	3.37		26.23	181	0.25
198	8.08	34.27u	2.02	-	150	8.46	33.97	2.50		26.42	165	0.33
245	7.82	-	1.52	-	200	8.07		2.00				
291	7.57	34.20	1.09	-	250	7.78		1.45				
343	7.11	34.27	0.84	-	300	7.50		1.04				
391	6.76	34.25	0.58	-	400	(6.70)		(0.53)				
90.60	BLACK DOUGLAS; February 19, 1951; 2142 GCT; 32°25'N, 119°57.5'W; sounding, 450 fm; wind, 320°, force 5; weather, clear; sea, high; wire angle, 12°.											
0	13.68	33.43	5.80	0.77	0	13.68	33.43	5.80	0.77	25.06	291	0.00
10	13.69	33.30	5.66	0.67	10	13.69	33.30	5.66	0.67	24.96	301	0.03
25	13.61	33.25	5.64	0.59	20	13.64	33.26	5.65	0.61	24.94	303	0.06
49	12.64	33.35	5.31	0.89	30	13.60	33.25	5.64	0.58	24.94	303	0.09
73	9.88	33.57	3.72	1.60	50	12.50	33.36	5.28	0.95	25.24	275	0.15
96	9.26	33.73	-	-	75	9.82	33.59	3.64	1.62	25.90	212	0.21
147	8.48	33.95	3.09	2.08	100	9.23	33.76	3.34	1.85	26.13	191	0.26
193	8.12	34.04	2.41	-	150	8.45	33.96	3.07	2.10	26.41	165	0.35
240	7.52	34.13	1.78	2.26	200	8.04	34.06	2.27	2.25	26.55	153	0.43
286	7.14	34.09	1.38	2.46	250	7.45	34.13	1.67	2.26	26.69	140	0.50
338	6.57	34.13	1.30	-	300	6.99	34.10	1.31	2.48	26.73	137	0.57
386	6.22	34.13	1.10	2.68	400	6.16	34.15	0.99	2.72	26.88	123	0.70
482	5.90	34.34	0.50	2.84	500	5.83	34.35	0.44	2.88	27.08	105	0.81
584	5.42	34.36	0.32	-	600	5.36	34.36	0.32	3.18	27.15	100	0.92
683	5.11	34.40u	0.36	3.28								

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

BLACK DOUGLAS; February 20, 1951; 0304, 0503 GCT; 32°04.5'N, 120°39'W; sounding, 2100 fm; wind, 320°, force 3; weather, clear; sea, very rough; wire angle, missing, 05°. 90.70

0	13.63	33.12	5.92	0.56	0	13.63	33.12	5.92	0.56	24.83	313	0.00
10	13.63	33.10	5.56	0.59	10	13.63	33.10	5.56	0.59	24.82	314	0.03
25	12.40	33.28	5.54	0.69	20	13.12	33.23	5.54	0.65	25.02	295	0.06
50	11.37	33.31	5.08	0.94	30	12.13	33.29	5.54	0.74	25.26	273	0.09
75	10.00	33.42	4.30	1.36	50	11.37	33.31	5.08	0.94	25.42	258	0.14
96	9.28	33.77	3.71	1.59	75	10.00	33.42	4.30	1.36	25.74	228	0.20
152	8.40	34.04	2.93	1.96	100	9.20	33.86	3.60	1.64	26.21	183	0.26
199	7.82	33.96	2.48	2.01	150	8.42	34.04	2.96	1.96	26.48	159	0.34
295	7.07	34.13	1.27	2.52	200	7.81	33.96	2.48	2.01	26.51	157	0.42
403	6.52	34.16	0.69	2.71	250	7.39	34.04	1.90	2.16	26.63	146	0.50
497	5.85	34.22	0.46	2.83	300	7.04	34.13	1.24	2.53	26.75	135	0.56
600	5.33	34.33	0.47	-	400	6.52	34.16	0.71	2.71	26.84	127	0.70
697	4.91	34.33	0.38	2.92	500	5.82	34.27	0.45	2.84	27.02	111	0.82
797	4.54	34.36	0.24	2.97	600	5.33	34.33	0.47	2.91	27.13	102	0.92
1002	3.90	34.45	0.67	2.92	700	4.90	34.33	0.38	2.92	27.18	98	1.02
					800	4.54	34.36	0.24	2.97	27.24	92	1.12
499a)	5.88	34.31	-	-	1000	3.91	34.45	0.67	2.92	27.38	80	1.29
887	4.27	34.42	0.46	2.78	1200	3.35	34.46	0.85	2.85	27.44	74	1.44
1082	3.62	34.45	0.74	2.76	1500	2.75	34.52	1.20	2.73	27.55	64	1.65
1378	3.02	34.52	1.03	-	2000	2.10	34.58	1.91	2.58	27.65	54	1.94
1621	2.54	34.52	1.37	2.67								
1869	2.23	34.58	1.75	-								
2117	1.96	34.58	2.02	2.54								
2366	1.86	34.69u	2.33	2.48								
2622	1.72	34.63	2.51	2.46								
2922	1.66	34.61	2.66	2.38								

BLACK DOUGLAS; February 20, 1951; 1151 GCT; 31°45'N, 121°19'W; sounding, 1980 fm; wind, 340°, force 3; weather, partly cloudy; sea, very rough; wire angle, 25°. 90.80

0	15.11	33.08	5.30	0.47	0	15.11	33.08	5.30	0.47	24.49	345	0.00
9	15.12	33.08	5.00	0.47	10	15.12	33.08	5.00	0.47	24.49	345	0.04
23	15.12	33.10	5.53	0.48	20	15.12	33.09	5.53	0.48	24.50	345	0.07
46	15.08	33.13	5.42	0.52	30	15.10	33.11	5.53	0.50	24.52	344	0.10
69	14.70	33.12	5.48	0.47	50	15.05	33.13	5.42	0.53	24.54	342	0.17
91	13.12	33.13b)	5.41	0.63	75	14.68	33.12	5.48	0.47	24.61	336	0.26
137	10.00	33.23b)	4.69	1.16	100	12.12	33.14	5.31	0.80	25.14	285	0.33
178	9.17	33.68	3.58	-	150	9.70	33.31	4.40	(1.28)	25.70	233	0.46
258	7.74	34.05	2.30	-	200	8.75	33.80	3.14	(1.71)	26.24	182	0.57
346	6.59	34.36	1.49	2.35	250	7.88	34.01	2.41	(1.93)	26.54	155	0.65
430	5.86	34.15	1.46u	-	300	7.15	34.28	1.88	(2.15)	26.85	125	0.72
522	5.51	34.30	0.55	2.82	400	6.08	34.22	1.13	2.53	26.95	117	0.84
701	4.90	34.39	0.42	2.84	500	5.57	34.27	0.64	2.80	27.05	108	0.96
882	4.33	34.46	0.46	-	600	5.28	34.35	0.44	2.83	27.15	100	1.06
					700	4.90	34.39	0.42	2.84	27.23	93	1.16
					800	4.57	34.43	0.45		27.29	87	1.25
					1000	(4.00)	(34.49)			(27.40)	(78)	(1.41)

a) Overlapping casts; reconciliation of property curves when necessary.

b) An error of +0.1‰ chlorinity in burette reading has been assumed. The listed observed and interpolated values incorporate the correction.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
90.90	BLACK DOUGLAS; February 20, 1951; 1804 GCT; 31°25'N, 121°59'W; sounding, 2210 fm; wind, 340°, force 3; weather, cloudy; sea, very rough; wire angle, 09°.											
0	16.38	33.33	5.45	0.44	0	16.38	33.33	5.45	0.44	24.40	354	0.00
10	16.38	33.37	6.04	0.42	10	16.38	33.37	6.04	0.42	24.43	351	0.04
26	16.38	33.35	5.66	0.45	20	16.37	33.36	5.81	0.43	24.42	352	0.07
50	16.46	33.37	5.58	0.42	30	16.38	33.35	5.63	0.45	24.41	353	0.11
74	16.54	33.39	5.66	0.44	50	16.46	33.37	5.58	0.42	24.41	354	0.18
98	14.29	33.34	5.74	-	75	16.54	33.39	5.66	0.44	24.41	355	0.26
150	10.46	-	5.25	1.03	100	14.00	33.34	5.75	0.51	24.93	306	0.35
198	9.66	33.78	4.32	1.38	150	10.46	33.56	5.25	1.03	25.77	227	0.48
291	7.70	33.96	2.51	-	200	9.63	33.79	4.30	(1.39)	26.09	197	0.59
395	6.28	34.00	2.08	2.38	250	8.67	33.91	3.38	(1.68)	26.34	174	0.68
491	5.74	34.13	0.94	-	300	7.53	33.97	2.42	(1.98)	26.55	154	0.76
591	5.20	34.27	0.46	2.91	400	6.23	34.00	2.07	2.39	26.76	135	0.91
789	4.42	34.45	0.46	2.94	500	5.69	34.14	0.87	2.69	26.93	119	1.03
986	3.82	34.47	0.62	2.94	600	5.15	34.28	0.46	2.92	27.11	103	1.14
1191	3.36	34.51	0.90	2.78	700	4.73	34.40	0.46	2.93	27.25	90	1.24
					800	4.39	34.45	0.46	2.94	27.38	83	1.33
					1000	3.78	34.47	0.62	2.93	27.41	76	1.49
90.100	BLACK DOUGLAS; February 20, 1951; 2353 GCT; 31°04.5'N, 122°40'W; sounding, 2280 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 15°.											
0	15.50	33.12	5.37	0.37	0	15.50	33.12	5.37	0.37	24.44	350	0.00
10	15.52	-	5.42	0.35	10	15.52	33.32	5.42	0.35	24.59	336	0.03
24	15.45	33.35	5.41	0.40	20	15.47	33.35	5.41	0.39	24.62	334	0.07
49	15.34	33.19	5.30	0.39	30	15.43	33.35	5.40	0.39	24.63	333	0.10
73	14.10	32.99	5.34	0.44	50	15.33	33.15	5.30	0.39	24.50	346	0.17
96	11.79	33.06	5.48	0.63	75	14.05	32.99	5.35	0.46	24.65	332	0.25
					100	(11.50)	(33.10)	(5.47)	(0.68)	(25.23)	(277)	(0.33)
90.110	BLACK DOUGLAS; February 21, 1951; 0548 GCT; 30°44.5'N, 123°20'W; sounding, 2160 fm; wind, 350°, force 2; weather, partly cloudy; sea, rough; wire angle, 09°.											
0	15.96	33.22	5.87	0.44	0	15.96	33.22	5.87	0.44	24.41	353	0.00
10	15.98	33.22	5.17	0.38	10	15.98	33.22	5.17	0.38	24.40	354	0.04
25	15.99	33.23	4.95	0.41	20	15.98	33.23	5.02	0.40	24.41	353	0.07
50	16.00	33.26	4.71	0.44	30	15.99	33.24	4.89	0.42	24.42	353	0.11
74	15.33	33.10	5.50	0.41	50	16.00	33.26	4.71	0.44	24.43	352	0.18
97	12.89	33.22	5.50	0.57	75	15.31	33.10	5.47	0.41	24.46	350	0.26
150	9.70	33.42	3.23u	1.20	100	12.55	33.23	5.45	0.62	25.13	287	0.34
197	8.63	33.86	3.24	1.60	150	9.70	33.42	4.36	1.20	25.79	224	0.47
291	7.46	34.07	2.31	-	200	8.58	33.87	3.18	(1.62)	26.32	175	0.57
391	6.12	34.10	-	2.40	250	7.90	34.02	2.65	(1.89)	26.54	154	0.65
485	5.57	34.23	0.80	-	300	7.36	34.07	2.24	(2.07)	26.66	144	0.73
586	5.28	34.31	0.45	2.77	400	6.03	34.11	1.44	2.44	26.87	124	0.86
783	4.24	34.42	0.33	2.85	500	5.51	34.24	0.73	2.71	27.03	110	0.98
978	3.69	34.45	0.52	-	600	5.22	34.32	0.44	2.77	27.13	101	1.08
1182	3.26	-	0.87	2.79	700	4.68	34.38	0.39	2.81	27.24	91	1.18
					800	4.17	34.42	0.35	2.86	27.33	83	1.27
					1000	3.62	(34.45)	0.56	2.90	(27.41)	(76)	(1.43)

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m
BLACK DOUGLAS; February 21, 1951; 1053, 1222 GCT; 30°24.5'N, 124°00.5'W; sounding, 2200 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 05°, 02°.												90.120
0	17.18	33.57	5.41	0.39	0	17.18	33.57	5.41	0.39	24.39	355	0.00
10	17.18	33.58	5.52	0.34	10	17.18	33.58	5.52	0.34	24.40	354	0.04
25	17.21	33.57	5.21	0.36	20	17.19	33.57	5.26	0.35	24.39	355	0.07
50	17.30	33.62	5.61	0.38	30	17.22	33.57	5.22	0.37	24.39	356	0.11
75	17.38	33.66	5.50	0.35	50	17.30	33.62	5.61	0.38	24.41	355	0.18
99	15.70	33.46	5.67	0.39	75	17.38	33.66	5.50	0.35	24.42	355	0.27
152	10.88	33.53	4.85	1.03	100	15.70	33.46	5.66	0.39	24.65	333	0.35
200	9.20	33.84	3.93	1.48	150	11.07	33.52	4.90	1.00	25.63	240	0.50
296	7.58	34.07	2.72	1.95	200	9.20	33.84	3.93	1.48	26.19	187	0.60
396	5.93	34.04	2.00	2.27	250	8.29	34.01	3.23	1.75	26.47	161	0.69
492	5.28	34.14	0.97	2.69	300	7.53	34.07	2.67	1.96	26.63	146	0.77
595	4.84	34.29	0.54	2.83	400	5.89	34.04	1.97	2.28	26.83	128	0.90
794	4.40	34.47	0.53	2.89	500	5.24	34.15	0.92	2.71	27.00	113	1.02
991	3.78	34.51	0.68	-	600	4.82	34.29	0.54	2.83	27.15	99	1.13
1199	3.34	34.58	1.09	2.86	700	4.56	34.40	0.53	2.88	27.27	88	1.22
					800	4.38	34.48	0.53	2.89	27.35	81	1.31
					1000	3.76	34.51	0.70	2.90	27.44	73	1.46
BLACK DOUGLAS; February 18, 1951; 0650 GCT; 32°50'N, 117°31.5'W; sounding, 480 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 17°.												93.30
0	14.11	33.24	5.66	0.51	0	14.11	33.24	5.66	0.51	24.83	313	0.00
11	13.96	33.28	5.81	0.49	10	13.99	33.28	5.80	0.49	24.88	308	0.03
25	13.66	33.31	4.85u	0.48	20	13.73	33.30	5.85	0.48	24.95	302	0.06
49	11.32	33.31	5.90	1.07	30	13.55	33.31	5.88	0.50	24.99	298	0.09
72	9.96	33.67	3.89	1.47	50	11.31	33.31	5.90	1.08	25.42	258	0.15
95	9.37	33.72	3.34	1.77	75	9.78	33.68	3.85	1.50	25.98	205	0.20
146	9.22	34.06	2.41	2.00	100	9.35	33.74	3.25	1.80	26.10	194	0.26
192	9.04	34.25	2.19	-	150	9.22	34.09	2.39	(2.01)	26.39	167	0.34
239	8.68	34.27	1.62	-	200	8.99	34.26	2.15	(2.29)	26.56	152	0.43
285	8.09	34.29	1.40	2.63	250	8.54	34.27	1.56	(2.49)	26.64	145	0.50
336	7.81	34.27	1.02	2.69	300	8.00	34.29	1.28	2.66	26.74	137	0.57
383	7.28	34.22	0.97	-	400	7.10	34.23	0.94	2.77	26.82	130	0.70
431	6.78	34.29	0.85	2.85	500	6.32	(34.34)	0.83	2.90	(27.01)	(113)	(0.82)
479	6.42	34.33	0.83	2.88								
582	5.92	-	0.73	2.95								
BLACK DOUGLAS; February 17, 1951; 1025 GCT; 32°30'N, 118°12.5'W; sounding, 920 fm; wind, 100°, force 2; weather, partly cloudy; sea, moderate; wire angle, 13°.												93.40
0	13.87	33.30	5.84	0.53	0	13.87	33.30	5.84	0.53	24.92	304	0.00
10	13.87	33.30	5.13	0.51	10	13.87	33.30	5.13	0.51	24.92	305	0.03
24	13.34	33.33	5.50	0.62	20	13.60	33.33	5.50	0.55	25.00	297	0.06
48	11.24	33.21	4.77	1.01	30	12.80	33.33	5.46	0.75	25.16	282	0.09
73	10.14	33.55	4.44	1.34	50	11.08	33.21	4.74	1.05	25.39	261	0.14
96	9.55	33.60	3.94	1.60	75	10.07	33.55	4.39	1.37	25.83	219	0.20
					100	(9.48)	(33.62)	(3.86)	(1.62)	(25.98)	(205)	(0.26)

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

93.50 BLACK DOUGLAS; February 17, 1951; 0403 GCT; 32°10'N, 118°53.5'W; sounding, 690 fm; wind, 090°, force 2; weather, cloudy; sea, moderate; wire angle, 21°.

0	13.80	33.22	4.38	0.60	0	13.80	33.22	4.38	0.60	24.87	307	0.00
9	13.79	33.12	4.39	0.56	10	13.79	33.12	4.39	0.56	24.80	316	0.03
23	12.96	33.22	5.67	0.65	20	13.78	33.22	5.66	0.60	24.88	309	0.06
46	11.06	33.13	5.30	1.00	30	12.05	33.21	5.64	0.72	25.21	277	0.09
71	10.32	-	4.33	-	50	10.93	33.13	5.20	1.04	25.35	264	0.15
94	9.62	33.57	3.60	1.49	75	10.20	33.36	4.16	1.27	25.66	236	0.21
143	8.88	33.86	2.88	1.84	100	9.50	33.62	3.51	1.54	25.98	206	0.26
186	8.27	34.31	2.46	-	150	8.78	33.92	2.83	(1.87)	26.33	173	0.36
267	7.88	34.33	1.45	2.41	200	8.18	34.32	2.29	(2.04)	26.73	136	0.44
361	6.78	34.34	0.93	3.04u	250	7.94	34.33	1.64	(2.34)	26.78	132	0.50
447	6.43	34.36	0.49	2.91	300	7.58	34.33	1.20		26.83	128	0.57
538	5.88	34.40	0.38	3.05	400	6.60	34.35	0.75		26.98	114	0.69
718	5.01	34.40	0.34	3.15	500	6.14	34.38	0.40	3.01	27.07	107	0.80
896	4.42	34.49	0.42	-	600	5.51	34.40	0.37	3.08	27.16	99	0.90
1089	3.91	34.56	0.42	3.23	700	5.08	34.40	0.35	3.14	27.21	95	1.00
					800	4.75	34.43	0.36	3.18	27.27	89	1.09
					1000	4.11	34.53	0.43	3.21	27.42	76	1.26

93.60 BLACK DOUGLAS; February 16, 1951; 2136 GCT; 31°50'N, 119°34'W; sounding, 1780 fm; wind, 300°, force 5; weather, overcast; sea, rough; wire angle, 15°.

0	14.36	33.39	5.07	-	0	14.36	33.39	5.07		24.88	307	0.00
10	14.36	33.46	5.24	0.51	10	14.36	33.46	5.24	0.51	24.94	302	0.03
24	14.24	33.44	5.02	0.51	20	14.27	33.45	5.06	0.51	24.95	305	0.06
48	12.15	33.30	5.43	0.77	30	14.22	33.41	5.07	0.52	24.93	304	0.09
71	11.62	33.30	4.74	0.89	50	12.09	33.29	5.43	0.79	25.27	273	0.15
96	9.88	33.62	3.30	1.56	75	11.42	33.32	4.52	0.91	25.41	259	0.22
					100	(9.73)	(33.66)	(3.23)		(25.97)	(206)	(0.27)

93.70 BLACK DOUGLAS; February 16, 1951; 1514 GCT; 31°29'N, 120°14'W; sounding, 2280 fm; wind, 300°, force 6; weather, partly cloudy; sea, very rough; wire angle, 09°.

0	14.44	33.09	5.58	0.51	0	14.44	33.09	5.58	0.51	24.64	331	0.00
10	14.46	33.09	5.59	0.49	10	14.46	33.09	5.59	0.49	24.64	331	0.03
25	14.42	33.09	5.74	0.47	20	14.43	33.09	5.71	0.47	24.64	331	0.07
50	13.65	33.07	5.70	0.57	30	14.38	33.09	5.75	0.48	24.65	330	0.10
75	12.20	33.12	5.41	0.75	50	13.65	33.07	5.70	0.57	24.79	318	0.16
99	10.20	33.08	4.97	1.08	75	12.20	33.12	5.41	0.75	25.11	288	0.24
151	9.00	33.96	4.38	-	100	10.16	33.08	4.95	(1.10)	25.45	256	0.31
200	8.50	33.93	3.93	-	150	9.02	33.96	4.39		26.32	174	0.42
296	7.02	34.00	2.33	2.21	200	8.50	33.93	3.93		26.38	169	0.50
398	5.79	34.11	1.57	-	250	7.85	33.96	3.16		26.50	158	0.58
494	5.51	34.22	0.72	-	300	6.95	34.00	2.29		26.66	143	0.66
596	5.16	34.27	0.41	3.01	400	5.78	34.11	1.55		26.90	121	0.79
796	4.56	34.47	0.42	3.12	500	5.50	34.22	0.70		27.02	111	0.91
991	3.96	34.51	0.40	-	600	5.14	34.27	0.41	3.01	27.10	104	1.01
1193	3.52	34.51	0.80	3.06	700	4.84	34.38	0.42	3.07	27.22	93	1.11
					800	4.55	34.47	0.42	3.12	27.33	84	1.20
					1000	3.93	34.51	0.40	3.12	27.43	75	1.36

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

BLACK DOUGLAS; February 16, 1951; 0814 GCT; 31°10'N, 120°54.5'W; sounding, 2180 fm; wind, 270°, force 4; weather, cloudy; sea, rough; wire angle, 20°. 93.80

0	16.46	33.86u	5.07	0.42	0	16.46	(33.32)	5.07	0.42	(24.37)	(357)	(0.00)
10	16.48	33.32	5.16	0.41	10	16.48	33.32	5.16	0.41	24.37	357	0.04
24	16.52	33.35	5.25	0.45	20	16.52	33.35	5.23	0.44	24.38	356	0.07
47	15.73	33.16	5.39	0.44	30	16.54	33.35	5.30	0.45	24.38	357	0.10
70	15.12	33.15	5.45	0.46	50	15.63	33.16	5.42	0.44	24.44	352	0.18
93	14.20	33.43	5.05	0.49	75	15.25	33.18	5.42	0.46	24.54	343	0.26
143	10.08	33.11	4.50	1.08	100	14.09	33.43	4.93	0.50	24.98	302	0.34
186	9.44	33.73	3.70	1.38	150	9.94	33.11	4.42	1.15	25.51	251	0.48
274	7.93	34.05	3.34	1.71	200	9.26	33.81	3.56	1.44	26.17	190	0.59
366	6.61	33.96	2.39	2.18	250	8.42	34.03	3.39	1.63	26.47	161	0.68
453	5.66	34.05	1.27	2.59	300	7.49	34.04	3.25	1.81	26.62	148	0.76
547	5.42	34.20	0.57	2.94	400	6.21	33.98	1.97	2.36	26.74	136	0.90
731	4.67	34.31	0.32	3.03	500	5.48	34.13	0.78	2.77	26.95	117	1.03
917	4.06	34.39	0.47	3.03	600	5.27	34.23	0.44	3.02	27.06	108	1.14
1115	3.56	34.47	0.79	3.03	700	4.83	34.29	0.32	3.03	27.15	100	1.24
					800	4.40	34.34	0.35	3.03	27.24	92	1.34
					1000	3.82	34.43	0.60	3.03	27.37	80	1.51

BLACK DOUGLAS; February 16, 1951; 0215 GCT; 30°50'N, 121°35'W; sounding, 2300 fm; wind, 320°, force 4; weather, light rain; sea, moderate; wire angle, 18°. 93.90

0	16.64	33.31	5.14	0.42	0	16.64	33.31	5.14	0.42	24.32	362	0.00
9	16.64	33.68u	5.30	0.41	10	16.65	(33.33)	5.30	0.41	(24.33)	(360)	(0.04)
23	16.68	33.51u	5.22	-	20	16.67	(33.35)	5.24	(0.39)	(24.34)	(360)	(0.07)
51	16.70	33.38	5.13	0.40	30	16.70	(33.36)	5.18	(0.38)	(24.34)	(360)	(0.11)
74	16.62	33.37	5.45	0.45	50	16.70	33.38	5.14	(0.40)	24.36	359	0.18
101	16.06	33.44	5.06	0.42	75	16.62	33.37	5.45	0.45	24.37	359	0.26
148	10.99	33.21	4.99	0.94	100	16.06	33.44	5.08	0.42	24.56	342	0.35
194	9.01	33.70	3.60	-	150	10.72	33.21	4.98	(0.97)	25.45	257	0.50
285	8.44	34.16	1.58	2.27	200	8.92	33.76	3.35	(1.50)	26.18	188	0.61
380	7.33	34.22	0.80	2.60	250	8.58	34.08	2.18	(1.95)	26.48	160	0.70
476	6.45	34.27	0.44	2.82	300	8.32	34.17	1.40	2.34	26.60	150	0.78
572	5.92	34.36	0.34	2.91	400	7.12	34.23	0.70	2.66	26.82	130	0.92
762	5.00	34.50	0.30	2.94	500	6.30	34.29	0.40	2.85	26.97	116	1.04
959	4.27	34.44	0.36	2.96	600	5.79	34.39	0.34	2.93	27.12	103	1.15
1159	3.72	34.48	0.71	2.95	700	5.30	34.48	0.32	2.94	27.25	91	1.25
					800	4.83	34.49	0.30	2.94	27.31	86	1.34
					1000	4.16	34.45	0.43	(2.96)	27.35	82	1.50

CREST; February 6, 1951; 2112 GCT; 32°11.5'N, 117°17'W; sounding, 720 fm; wind, 310°, force 1; weather, overcast; sea, moderate; wire angle, 12°. 97.32

0	13.96		5.81	0.55	0	13.96	5.81	0.55
10	13.80		6.28	0.56	10	13.80	6.28	0.56
24	13.48		5.49	0.57	20	13.58	5.68	0.57
49	11.99		5.12	0.89	30	13.32	5.40	0.60
73	10.10		4.50	1.55	50	11.74	5.09	0.90
98	10.01		2.91	1.90	75	10.07	4.40	1.57
153	9.74		1.99	2.31	100	10.00	2.85	1.92
203	9.21		1.22	2.56	150	9.76	2.02	2.29
255	8.56		0.94	2.64	200	9.25	1.24	2.55
305	8.18		-	2.69	250	8.60	0.96	2.64
362	7.57		0.70	2.75	300	8.22	0.83	2.68
413	6.90		0.63	2.87	400	7.04	0.64	2.83
464	6.46		0.51	2.91	500	6.19	0.44	2.91
515	6.09		0.41	2.92	600	5.63	0.38	3.04
622	5.54		0.36	3.08				

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
97.40	BLACK DOUGLAS; February 14, 1951; 1258 GCT; 31°55.5'N, 117°50'W; sounding, 800 fm; wind, 360°, force 2; weather, clear; sea, moderate; wire angle, missing.											
0	15.32	33.35	5.30		0	15.32	33.35	5.30		24.65	330	0.00
10	15.34	33.31	4.65		10	15.34	33.31	4.65		24.62	334	0.03
25	15.34	33.35	5.22		20	15.35	33.35	5.00		24.64	331	0.07
50	14.04	33.28	5.68		30	15.32	33.34	5.38		24.64	331	0.10
75	12.36	33.22	5.52		50	14.04	33.28	5.68		24.87	310	0.16
98	10.85	33.40	4.87		75	12.36	33.22	5.52		25.16	283	0.24
152	9.82	33.87	3.15		100	10.76	33.41	4.72		25.60	242	0.30
200	8.74	33.96	2.81		150	9.89	33.86	3.20		26.10	195	0.41
296	7.76	34.16	1.55		200	8.74	33.96	2.81		26.37	170	0.50
397	6.92	34.23	0.85		250	8.18	34.08	2.29		26.55	154	0.58
493	6.14	34.31	0.45		300	7.74	34.16	1.49		26.67	143	0.66
594	5.66	-	0.41		400	6.89	34.23	0.83		26.85	127	0.80
793	4.71	34.43	0.38		500	6.11	34.31	0.44		27.02	112	0.91
989	4.06	34.51	0.76		600	5.63	34.36	0.41		27.11	103	1.02
1192	3.46	34.60	0.83		700	5.16	34.40	0.40		27.20	96	1.12
					800	4.69	34.43	0.40		27.28	89	1.21
					1000	4.04	34.51	0.76		27.41	77	1.38
97.50	BLACK DOUGLAS; February 14, 1951; 1849 GCT; 31°35.5'N, 118°30'W; sounding, 1340 fm; wind, 060°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.											
0	15.68	33.35	5.75	-	0	15.68	33.35	5.75		24.57	337	0.00
10	15.67	33.35	5.71	0.44	10	15.67	33.35	5.71	0.44	24.57	338	0.03
25	15.63	33.30	5.73	0.34	20	15.65	33.32	5.72	0.36	24.56	340	0.07
50	15.56	33.33	5.59	0.41	30	15.62	33.30	5.73	0.34	24.55	341	0.10
75	13.27	33.33	5.83	-	50	15.56	33.33	5.59	0.41	24.58	338	0.17
99	11.38	33.23	5.27	0.85	75	13.27	33.33	5.83	0.60	25.06	292	0.25
152	9.17	33.58	4.43	-	100	11.35	33.23	5.22	0.85	25.36	265	0.32
200	8.67	33.89	3.75	1.46	150	9.25	33.56	4.44	1.08	25.97	207	0.44
294	7.38	34.11	2.32	2.14	200	8.67	33.89	3.75	1.46	26.32	175	0.53
394	6.87	34.20	1.21	-	250	8.03	34.03	2.99	1.84	26.53	156	0.61
489	5.86	34.23	0.66	-	300	7.34	34.12	2.22	(2.19)	26.70	140	0.69
590	5.52	34.29	0.58	-	400	6.84	34.20	1.16		26.83	129	0.82
788	4.70	34.36	0.51	-	500	5.80	34.23	0.63		26.99	114	0.94
982	4.08	34.43	0.70	2.96	600	5.49	34.29	0.56		27.08	107	1.05
1185	3.50	34.58	0.99	2.92	700	5.10	34.33	0.54		27.15	100	1.16
					800	4.66	34.36	0.51		27.23	93	1.25
					1000	4.03	34.33	0.73		27.27	90	1.44
97.60	BLACK DOUGLAS; February 15, 1951; 0109 GCT; 31°15.5'N, 119°10.5'W; sounding, 2020 fm; wind, 360°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.											
0	15.88	33.22	5.66	0.40	0	15.88	33.22	5.66	0.40	24.43	251	0.00
10	15.70	33.19	5.52	0.37	10	15.70	33.19	5.52	0.37	24.44	350	0.04
25	14.07	33.08	5.65	0.41	20	15.05	33.12	5.62	0.39	24.53	342	0.07
50	13.27	33.10	5.48	0.49	30	13.90	33.08	5.64	0.42	24.75	322	0.10
76	11.62	33.08	5.51	0.77	50	13.27	33.10	5.48	0.49	24.89	308	0.17
100	10.12	33.26	4.41	1.20	75	11.70	33.08	5.51	0.77	25.18	282	0.24
152	9.14	33.71	3.57	1.59	100	10.12	33.26	4.41	1.20	25.60	242	0.30
199	8.44	33.94	2.77	1.78	150	9.19	33.70	3.59	1.58	26.09	196	0.42
293	7.06	-	2.14	2.15	200	8.44	33.94	2.76	1.78	26.40	168	0.50
393	6.00	34.07	1.23	2.60	250	7.69	34.00	2.42	1.98	26.56	153	0.58
487	5.63	34.18	0.64	-	300	6.97	34.03	2.07	2.18	26.68	142	0.66
588	5.68	34.34	0.24	-	400	5.95	34.07	1.16	(2.62)	26.85	126	0.79
785	4.70	34.43	0.35	2.88	500	5.62	34.20	0.59	(2.78)	26.99	114	0.91
981	4.01	-	-	-	600	5.66	34.35	0.25	(2.84)	27.10	104	1.02
1184	3.51	34.51	0.78	2.82	700	5.24	34.40	0.31	(2.87)	27.19	97	1.12
					800	4.63	34.43	0.36	2.88	27.29	88	1.22
					1000	3.97	34.48	0.52	2.86	27.40	78	1.38

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
BLACK DOUGLAS; February 15, 1951; 0644 GCT; 30°55'N, 119°50.5'W; sounding, 2020 fm; wind, 220°, force 2; weather, partly cloudy; sea, moderate; wire angle, 08°.												97.70
0	14.50	33.08	5.29		0	14.50	33.08	5.29		24.62	333	0.00
10	14.48	33.12	5.21		10	14.48	33.12	5.21		24.66	330	0.03
26	14.13	33.10	5.62		20	14.32	33.11	5.61		24.68	328	0.07
51	13.68	-	5.40		30	14.04	33.10	5.62		24.73	323	0.10
75	12.86	33.07	5.25		50	13.70	33.08	5.41		24.79	318	0.16
99	11.17	33.05	5.04		75	12.86	33.07	5.25		24.95	304	0.24
151	9.64	33.49	3.90		100	11.13	33.05	5.03		25.26	274	0.31
198	8.88	33.85	2.97		150	9.68	33.49	3.97		25.85	219	0.42
292	7.58	34.07	1.73		200	8.82	33.86	2.92		26.28	179	0.54
392	6.60	34.14	1.06		250	8.09	34.00	2.20		26.50	159	0.62
486	5.58	34.14	0.87		300	7.49	34.08	1.66		26.65	145	0.70
586	5.28	34.24	0.48		400	6.51	34.14	1.03		26.83	129	0.83
783	4.83	34.38	0.37		500	5.52	34.14	0.84		26.95	117	0.96
977	4.16	34.44	0.57		600	5.25	34.25	0.46		27.07	107	1.07
1182	3.65	34.51	0.70		700	5.03	34.34	0.41		27.17	98	1.17
					800	4.78	34.39	0.37		27.24	93	1.26
					1000	4.08	34.45	0.59		27.36	82	1.44
BLACK DOUGLAS; February 15, 1951; 1320 GCT; 30°35.5'N, 120°31'W; sounding, 2120 fm; wind, 170°, force 3; weather, clear; sea, moderate; wire angle, 24°.												97.80
0	16.16	33.48u	6.21	0.46	0	16.16	(33.25)	6.21	0.46	(24.38)	(356)	(0.00)
9	16.17	33.25	5.57	0.42	10	16.17	33.25	5.54	0.42	24.38	356	0.04
23	16.16	33.25	5.40	0.40	20	16.16	33.25	5.42	0.40	24.39	356	0.07
45	16.12	33.37	5.58	-	30	16.15	33.28	5.44	(0.40)	24.41	354	0.11
68	15.25	33.31	5.58	-	50	16.07	33.37	5.58	(0.40)	24.50	346	0.18
90	13.79	33.33	5.70	0.52	75	14.87	33.31	5.63	(0.41)	24.72	326	0.26
137	10.80	33.19	5.17	0.91	100	13.02	33.31	5.68	0.62	25.10	290	0.34
180	9.44	33.75	4.52	1.18	150	10.26	33.48	4.93	1.00	25.74	229	0.47
267	7.90	33.96	3.73	1.62	200	9.03	33.83	4.31	1.30	26.22	185	0.57
357	6.52	33.98	2.27	2.21	250	8.19	33.94	3.86	1.55	26.43	165	0.66
445	6.18	34.14	0.85	-	300	7.16	33.97	3.30	1.80	26.61	149	0.74
479p	5.92	34.18	0.64	-	400	6.33	34.06	1.52	(2.41)	26.79	132	0.88
631p	5.18	34.28	0.36	2.89	500	5.78	34.20	0.57	(2.80)	26.97	116	1.00
781p	4.47	34.39	0.41	2.94	600	5.32	34.26	0.39	(2.88)	27.07	107	1.11
					700	4.81	34.34	0.36	2.91	27.20	96	1.21
BLACK DOUGLAS; February 15, 1951; 1925 GCT; 30°15'N, 121°11'W; sounding, 2140 fm; wind, 180°, force 3; weather, light drizzle; sea, moderate; wire angle, 20°.												97.90
0	15.82	33.26	5.33	0.47	0	15.82	33.26	5.33	0.47	24.47	347	0.00
9	15.84	33.26	5.31	0.43	10	15.84	33.26	5.31	0.43	24.47	348	0.04
24	15.82	33.40	5.41	-	20	15.84	33.39	5.41	0.43	24.57	338	0.07
47	15.60	33.37	5.29	0.45	30	15.79	33.40	5.40	0.44	24.59	337	0.10
70	13.02	33.24	4.83	-	50	15.49	33.35	5.27	0.47	24.61	335	0.17
94	11.89	33.49	4.60	1.09	75	12.71	33.24	4.77	0.80	25.11	288	0.25
143	10.46	33.64	3.70	1.48	100	11.67	33.51	4.53	1.15	25.51	250	0.32
176	9.30	-	2.78	1.81	150	10.25	33.66	3.48	1.52	25.88	216	0.43
277	7.72	34.02	2.78u	-	200	8.80	33.83		(1.93)	26.25	181	0.53
371	6.50	34.09	1.37	2.54	250	8.07	33.97		(2.08)	26.48	161	0.62
461	5.93	34.16	0.79	2.72	300	7.41	34.05		(2.25)	26.63	146	0.69
557	5.35	34.23	0.47	-	400	6.29	34.11	1.18	2.60	26.83	128	0.83
748	4.62	34.33	0.44	3.02	500	5.70	34.19	0.59	(2.82)	26.97	116	0.95
940	4.04	34.43	0.50	2.98	600	5.15	34.25	0.46	(2.95)	27.09	105	1.06
1141	3.53	34.47	0.73	-	700	4.78	34.31	0.45	(3.00)	27.18	98	1.16
					800	4.47	34.36	0.45	3.02	27.25	91	1.26
					1000	3.87	34.45	0.54		27.38	79	1.43

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m

100.30 CREST; February 7, 1951; 0306 GCT; 31°40.5'N, 116°46.5'W; sounding, 210 fm; wind, 310°, force 3; weather, clear; sea, moderate; wire angle, 15°.

0	13.13		5.55	0.55	0	13.13		5.55	0.55		
10	13.00		6.09	0.54	10	13.00		6.09	0.54		
24	11.81		4.31	1.10	20	12.72		5.72	0.91		
48	10.62		3.77	1.54	30	11.30		4.14	1.23		
72	10.45		2.29	2.01	50	10.59		3.72	1.58		
98	10.28		2.05	2.05	75	10.43		2.25	2.01		
149	9.38		1.53	2.21	100	10.25		2.03	2.06		
196	9.02		1.35	2.41	150	9.36		1.53	2.21		
243	8.62		1.12	2.54	200	8.99		1.34	2.42		
288	8.30		0.91	2.56	250	8.45		1.08	2.55		

100.40 BLACK DOUGLAS; February 12, 1951; 0712, 0739 GCT; 31°21'N, 117°27'W; sounding, 1090 fm; wind, 320°, force 4; weather, intermittent light drizzle; sea, rough; wire angle, 10°, 03°.

0	14.67	33.31	5.72		0	14.67	33.31	5.72		24.76	319	0.00
10	14.69	33.31	5.81		10	14.69	33.31	5.81		24.76	320	0.03
25	14.69	33.31	5.78		20	14.70	33.31	5.79		24.76	320	0.06
49	14.58	33.33	5.79		30	14.69	33.31	5.77		24.76	321	0.10
74	12.58	33.19	5.77		50	14.57	33.33	5.79		24.80	317	0.16
99	10.68	33.35	5.17		75	12.56	33.19	5.76		25.10	289	0.24
151	9.20	33.64	3.89		100	10.65	33.35	5.12		25.57	244	0.30
198	9.49	34.13	2.23		150	9.21	33.63	3.93		26.03	201	0.41
					200	9.48	34.13	2.14		26.38	170	0.51
300	8.36	34.25	1.09		250	9.09	34.21	1.48		26.51	158	0.59
399	6.98	-	0.59		300	8.36	34.25	1.09		26.65	145	0.66
495	6.28	34.31	0.47		400	6.96	34.29	0.58		26.89	124	0.80
594	5.76	34.33	0.35		500	6.26	34.31	0.46		27.00	114	0.92
791	4.70	34.43	0.45		600	5.73	34.33	0.35		27.08	107	1.03
986	4.00	34.47	0.61		700	5.19	34.39	0.42		27.19	97	1.13
1188	3.54	34.51	0.83		800	4.66	34.43	0.45		27.28	88	1.22
					1000	4.02	34.47	0.63		27.38	79	1.39

100.50 BLACK DOUGLAS; February 12, 1951; 0058, 0114 GCT; 31°01'N, 118°07'W; sounding, 980 fm; wind, 290°, force 3; weather, intermittent light drizzle; sea, rough; wire angle, 11°, 11°.

0	15.08	33.33	5.84		0	15.08	33.33	5.84		24.69	326	0.00
10	15.06	33.37	5.83		10	15.06	33.37	5.83		24.72	323	0.03
24	14.92	33.35	5.84		20	14.97	33.36	5.85		24.74	322	0.06
49	14.82	33.31	5.86		30	14.88	33.34	5.84		24.74	322	0.10
					50	14.56	33.30	5.86		24.78	319	0.16
79a)	11.38	33.08	5.29		75	11.82	33.09	5.45		25.16	283	0.24
129	10.85	33.71	3.18		100	11.08	33.36	4.29		25.51	251	0.30
227	8.69	34.02	2.99		150	10.54	33.79	3.03		25.94	211	0.42
330	7.52	34.20	1.17		200	9.41	33.95	3.00		26.25	182	0.52
427	6.76	34.27	0.65		250	8.32	34.07	2.76		26.52	157	0.60
528	6.15	34.29	0.38		300	7.78	34.16	1.55		26.67	143	0.68
728	5.00	34.34	0.35		400	6.96	34.26	0.77		26.86	126	0.81
921	4.28	-	0.48		500	6.33	34.28	0.44		26.96	117	0.93
1123	3.70	34.54	0.70		600	5.74	34.30	0.36		27.05	109	1.05
					700	5.16	34.33	0.35		27.15	101	1.15
					800	4.69	34.37	0.38		27.23	93	1.25
					1000	4.07	34.48	0.56		27.39	79	1.42

a) Because of uncertain winch readings, the bathythermograph was used to determine the depths of the second cast.

OBSERVED					INTERPOLATED					COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m	
BLACK DOUGLAS; February 11, 1951; 1843, 1855 GCT; 30°41'N, 118°47.5'W; sounding, 1480 fm; wind, 340°, force 3; weather, intermittent light drizzle; sea, rough; wire angle, 15°, 20°.													100.60
0	15.32	33.37	5.73		0	15.32	33.37	5.73		24.67	328	0.00	
10	15.29	33.33	5.74		10	15.29	33.33	5.74		24.64	331	0.03	
24	15.24	33.33	5.73		20	15.26	33.33	5.73		24.65	331	0.07	
48	14.66	33.26	5.70		30	15.16	33.32	5.71		24.66	330	0.10	
					50	14.43	33.24	5.71		24.76	321	0.16	
61a)	12.68	33.17	5.73		75	11.85	33.17	5.73		25.22	278	0.24	
118	10.30	33.51	4.50		100	10.90	33.35	5.08		25.53	248	0.30	
201	9.26	34.22	1.85		150	9.83	33.82	3.25		26.08	197	0.42	
291	8.25	-	1.21		200	9.27	34.22	1.86		26.48	160	0.50	
376	7.15	34.24	0.92		250	8.72	34.24	1.46		26.59	151	0.58	
466	6.44	34.25	0.61		300	8.13	34.24	1.16		26.68	143	0.66	
649	5.30	34.31	0.43		400	6.89	34.24	0.82		26.86	126	0.79	
837	4.53	34.42	0.42		500	6.23	34.26	0.57		26.96	117	0.86	
1038	4.03	34.48	0.60		600	5.60	34.29	0.48		27.06	108	0.98	
					700	5.05	34.34	0.43		27.17	99	1.08	
					800	4.66	34.40	0.42		27.26	90	1.18	
					1000	4.11	34.47	0.55		27.38	80	1.35	
BLACK DOUGLAS; February 11, 1951; 1302 GCT; 30°20.5'N, 119°27'W; sounding, 2100 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 17°.													100.70
0	16.63	33.38	5.54		0	16.63	33.38	5.54		24.38	356	0.00	
10	16.64	-	5.56		10	16.64	33.44	5.56		24.42	352	0.04	
24	16.63	33.46	5.49		20	16.63	33.46	5.52		24.44	351	0.07	
47	16.59	33.33	5.39		30	16.63	33.44	5.44		24.42	352	0.11	
72	16.03	33.26	5.64		50	16.56	33.31	5.41		24.34	361	0.18	
96	13.93	33.30	5.62		75	15.86	33.26	5.65		24.46	350	0.27	
145	10.90	33.39	5.11		100	13.62	33.31	5.59		24.98	301	0.35	
188	9.85	34.03	2.88		150	10.73	33.41	4.98		25.61	242	0.48	
272	8.77	34.13	1.93		200	9.67	34.05	2.59		26.29	175	0.59	
361	7.84	-	0.99		250	9.02	34.11	2.03		26.44	160	0.67	
450	7.06	34.26	0.61		300	8.46	34.16	1.72		26.57	148	0.75	
543	6.02	34.33	0.38		400	7.48	34.23	0.74		26.77	129	0.89	
727	4.96	34.36	0.36		500	6.46	34.30	0.44		26.96	110	1.01	
912	4.26	34.40	0.52		600	5.64	34.34	0.37		27.10	105	1.12	
					700	5.09	34.36	0.36		27.18	98	1.22	
					800	4.66	34.38	0.41		27.24	92	1.31	
					1000	(3.97)	(34.42)			(27.35)	(83)	(1.48)	
BLACK DOUGLAS; February 11, 1951; 0633 GCT; 30°01'N, 120°07'W; sounding, 2100 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 17°.													100.80
0	17.06	33.42	5.44		0	17.06		5.44					
10	17.07	-	5.00		10	17.07		5.00					
24	17.06	33.67	5.48		20	17.07		5.47					
47	17.10	33.66	5.46		30	17.07		5.48					
71	16.45	33.35	5.43		50	17.10		5.44					
94	15.69	33.51	5.71		75	16.31		5.45					
143	11.45	-	5.22		100	15.48		5.69					
187	10.08	-	4.41		150	11.22		5.12					
276	7.89	-	3.15		200	9.72		4.18					
371	6.64	-	1.56		250	8.47		3.46					
461	6.02	34.14	0.92		300	7.52		2.81					
555	5.58	34.25	0.58		400	6.39		1.29					
744	4.91	34.39	0.40		500	5.83		0.75					
931	4.30	-	0.56		600	5.39		0.54					
1127	3.69	34.60	0.79		700	5.05		0.44					
					800	4.73		0.42					
					1000	4.07		0.67					

a) Possible posttrip beginning at 61 meters.

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

100.90 BLACK DOUGLAS; February 10, 1951; 2357 GCT; 29°40.5'N, 120°47'W; sounding, 2220 fm; wind, 340°, force 1; weather, cloudy; sea, moderate; wire angle, 04°.

0	17.06	33.46	5.56	0	17.06	33.46	5.56	24.34	360	0.00
10	16.58	33.33	5.60	10	16.58	33.33	5.60	24.35	359	0.04
25	16.36	33.31	5.69	20	16.41	33.31	5.66	24.38	357	0.07
50	16.12	33.28	5.63	30	16.31	33.30	5.69	24.39	356	0.11
75	15.98	33.26	5.68	50	16.12	33.28	5.63	24.42	354	0.18
100	14.77	33.21	5.80	75	15.98	33.26	5.68	24.44	353	0.27
142	11.48	33.21	5.40	100	14.77	33.21	5.80	24.66	331	0.35
202	9.64	33.91	4.66	150	11.13	33.24	5.30	25.40	262	0.50
297	8.15	-	2.24	200	9.69	33.90	4.69	26.17	190	0.61
397	6.95	34.18	1.18	250	8.79	34.04	3.53	26.42	166	0.70
493	6.28	-	-	300	8.12	34.11	2.20	26.58	152	0.78
595	5.44	-	0.35	400	6.93	(34.18)	1.16	(26.80)	(131)	(0.92)
792	4.73	-	0.35	500	6.24		0.61			
989	4.01	-	0.58	600	5.42		0.35			
1193	3.47	-	0.84	700	5.01		0.35			
				800	4.71		0.35			
				1000	3.98		0.59			

105.35 CREST; February 7, 1951; 1036 GCT; 30°39'N, 116°33'W; sounding, 800 fm; wind, 310°, force 2; weather, fog; sea, smooth; wire angle, 08°.

0	13.76	5.79	0.59	0	13.76	5.79	0.59
10	13.73	5.85	0.58	10	13.73	5.85	0.58
25	13.68	5.48	0.56	20	13.69	5.67	0.56
50	11.34	4.85	1.17	30	13.67	5.33	0.57
74	10.67	3.76	1.65	50	11.34	4.85	1.17
87p	10.47	2.87	1.77	75	10.67	3.30	1.66
99	10.12	2.90	1.72	100	10.10	2.90	1.72
144p	9.18	2.49	1.94	150	9.10	2.42	1.98
263p	8.26	1.33	2.52	200	8.68	1.91	2.24
397p	7.10	0.63	2.85	250	8.35	1.45	2.46
486p	6.42	0.37	2.97	300	7.95	1.11	2.62
595p	5.86	0.31	2.96u	400	7.08	0.63	2.86
795p	4.92	0.31	3.04	500	6.35	0.35	(2.98)
997p	4.06	0.57	2.97	600	5.85	0.30	(3.02)
1204p	3.48	0.78	3.04	700	5.40	0.31	(3.03)
				800	4.90	0.31	3.04
				1000	4.05	0.58	2.97

105.40 BLACK DOUGLAS; February 9, 1951; 0906 GCT; 30°28.5'N, 116°54'W; sounding, 1120 fm; wind, 320°, force 2; weather, overcast; sea, very rough; wire angle, 10°.

0	14.86	33.31	5.59	0	14.86	33.31	5.59	24.72	323	0.00
10	14.88	33.30	5.74	10	14.88	33.30	5.74	24.71	324	0.03
24	14.87	33.30	-	20	14.87	33.30	5.75	24.71	324	0.06
49	13.85	33.25	5.45	30	14.80	33.29	5.67	24.72	324	0.10
74	11.64	33.31	4.80	50	13.73	33.25	5.43	24.91	306	0.16
98	10.88	33.48	4.08	75	11.62	33.31	4.79	25.37	263	0.23
151	9.25	33.82	2.98	100	10.77	33.49	4.06	25.66	236	0.29
198	8.79	34.07	2.52	150	9.27	33.81	3.02	26.16	189	0.40
292	7.88	34.20	1.22	200	8.78	34.08	2.50	26.45	162	0.49
391	7.16	34.25	0.36	250	8.27	34.17	1.87	26.60	149	0.57
486	6.44	34.32	0.36	300	7.78	34.20	1.07	26.70	140	0.64
585	5.77	34.34	0.28	400	7.09	34.25	0.35	26.84	128	0.77
781	4.77	34.40	0.36	500	6.34	34.32	0.35	26.99	114	0.89
975	4.07	-	0.51	600	5.68	34.34	0.29	27.09	106	1.00
1179	3.58	34.51	0.74	700	5.16	34.36	0.32	27.17	98	1.11
				800	4.69	34.41	0.36	27.27	90	1.20
				1000	4.01	34.48	0.54	27.39	78	1.37

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
BLACK DOUGLAS; February 9, 1951; 1507 GCT; 30°08.5'N, 117°34.5'W; sounding, 800 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 10°.												105.50
0	14.63	33.33	5.87		0	14.63	33.33	5.87		24.79	317	0.00
10	14.64	33.33	6.19		10	14.64	33.33	6.19		24.78	318	0.03
24	14.64	33.30	6.12		20	14.64	33.31	6.17		24.77	319	0.06
48	14.14	33.27	6.02		30	14.63	33.29	6.09		24.75	321	0.10
72	11.58	33.16	5.61		50	13.55	33.27	5.99		24.96	301	0.16
92	11.06	33.48	4.17		75	11.48	33.18	5.47		25.29	270	0.23
133	9.75	33.68	3.74		100	10.77	33.53	3.98		25.69	233	0.29
BLACK DOUGLAS; February 9, 1951; 2049 GCT; 29°48.5'N, 118°14.5'W; sounding, 1920 fm; wind, 320°, force 2; weather, overcast; sea, very rough; wire angle, 10°.												105.60
0	15.50	33.35	5.68		0	15.50	33.35	5.68		24.61	334	0.00
10	15.32	33.53	5.16		10	15.32	33.53	5.16		24.79	317	0.03
24	15.25	33.35	5.55		20	15.26	33.36	5.56		24.67	328	0.06
49	14.87	33.35	5.37		30	15.20	33.34	5.52		24.67	329	0.10
73	12.54	-	5.57		50	14.79	33.35	5.38		24.77	320	0.16
98	11.07	33.75	4.68		75	12.35	33.64	5.56		25.49	252	0.23
					100	(11.00)	(33.75)	(4.63)		(25.82)	(221)	(0.29)
BLACK DOUGLAS; February 10, 1951; 0249 GCT; 29°29'N, 118°54'W; sounding, 1900 fm; wind, 290°, force 1; weather, overcast; sea, rough; wire angle, 10°.												105.70
0	14.81	33.30	5.91		0	14.81	33.30	5.91		24.72	323	0.00
10	14.70	-	5.67		10	14.70	33.28	5.67		24.73	322	0.03
24	14.32	33.26	5.87		20	14.61	33.26	5.83		24.74	322	0.06
49	13.00	33.28	5.58		30	14.25	33.26	5.85		24.81	315	0.10
75	10.94	33.39	4.86		50	12.90	33.28	5.57		25.10	288	0.16
99	10.35	33.69	3.95		75	10.94	33.39	4.86		25.55	246	0.22
134	9.26	33.96	3.59		100	10.31	33.71	3.95		25.91	212	0.28
199	8.56	34.02	2.53		150	9.02	33.99	3.40		26.35	172	0.38
292	7.52	34.14	1.93		200	8.53	34.02	2.52		26.45	163	0.46
391	6.59	34.27	1.36		250	8.01	34.07	2.14		26.56	152	0.54
485	6.09	34.22	0.55		300	7.43	34.15	1.91		26.71	139	0.61
583	5.06	34.29	0.60		400	6.52	34.27	1.27		26.93	119	0.74
780	4.42	34.36	0.52		500	5.96	34.22	0.56		26.96	117	0.86
975	3.88	34.48	0.91		600	4.96	34.30	0.60		27.15	99	0.97
1178	3.48	34.51	0.61		700	4.62	34.33	0.55		27.21	94	1.06
					800	4.37	34.37	0.55		27.27	89	1.16
					1000	3.82	34.49	0.92		27.42	75	1.32
BLACK DOUGLAS; February 10, 1951; 0934 GCT; 29°09'N, 119°34'W; sounding, 2000 fm; wind, 280°, force 1; weather, cloudy; sea, rough; wire angle, 10°.												105.80
0	15.80	-	5.87		0	15.80	(33.28)	5.87		(24.49)	(345)	(0.00)
9	15.62	33.49u	5.68		10	15.62	(33.28)	5.68		(24.53)	(342)	(0.03)
23	15.36	33.28	5.70		20	15.41	(33.28)	5.69		(24.58)	(337)	(0.07)
49	14.36	33.28	6.02		30	15.22	33.28	5.78		24.62	334	0.10
74	13.05	33.26	5.87		50	14.36	33.28	6.02		24.80	317	0.17
99	11.18	33.46	5.29		75	13.01	33.26	5.87		25.06	292	0.24
151	10.49	33.84	2.53		100	11.13	33.47	5.27		25.58	244	0.31
196	8.95	33.93	-		150	10.51	33.84	2.58		25.98	207	0.42
263	8.42	34.31	1.40		200	8.89	33.95	1.82		26.33	174	0.52
379	7.10	34.42	1.04		250	8.49	34.26	1.50		26.64	146	0.60
468	6.56	34.34	0.52		300	8.10	34.38	1.32		26.79	132	0.67
563	5.60	34.30	0.50		400	6.93	34.41	0.93		26.98	114	0.79
751	4.64	34.38	0.36		500	6.27	34.32	0.51		27.00	113	0.90
942	4.14	34.51	0.62		600	5.32	34.32	0.47		27.10	104	1.01
1141	3.62	-	0.82		700	4.82	34.34	0.38		27.19	96	1.11
					800	4.51	34.42	0.40		27.29	87	1.20
					1000	3.98	(34.52)	0.70		(27.43)	(75)	(1.36)

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m
105.90	BLACK DOUGLAS; February 10, 1951; 1524 GCT; 28°49.5'N, 120°14'W; sounding, 1940 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 00°.											
0	16.56	33.42	5.51		0	16.56	33.42	5.51		24.43	351	0.00
10	16.58	33.39	5.53		10	16.58	33.39	5.53		24.40	354	0.04
25	16.54	33.42	5.24		20	16.55	33.41	5.25		24.42	352	0.07
50	16.38	33.39	5.48		30	16.51	33.42	5.28		24.44	351	0.11
75	16.09	33.48	4.95		50	16.38	33.39	5.48		24.44	351	0.18
99	14.19	33.57	5.54		75	16.09	33.48	4.95		24.58	339	0.26
134	12.24	33.53	5.21		100	14.17	33.57	5.54		25.07	293	0.34
199	9.26	33.80	4.07		150	11.35	33.59	5.00		25.64	240	0.47
296	7.89	34.13	2.37		200	9.22	33.80	4.06		26.16	190	0.58
397	7.32	34.47	1.12		250	8.37	33.98	3.22		26.44	164	0.67
494	6.02	-	1.06		300	7.85	34.15	2.30		26.65	145	0.75
595	5.44	34.47	0.43		400	7.30	34.47	1.12		26.98	115	0.88
795	4.74	34.47	0.43		500	5.97	34.42	1.05		27.12	102	0.98
992	4.10	34.49	0.57		600	5.41	34.47	0.43		27.23	92	1.08
1197	3.59	34.54	0.79		700	5.01	34.47	0.44		27.28	88	1.17
					800	4.73	34.47	0.45		27.31	86	1.26
					1000	4.07	34.49	0.57		27.40	78	1.43
105.90	BLACK DOUGLAS; February 10, 1951; 1634 GCT;[a] 28°49.5'N, 120°14'W; sounding, 1940 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 00°.											
678	-	34.36										
703	5.02	34.41										
727	4.93	-										
751	4.88	34.40										
775	4.82	34.43										
800	4.74	-										
825	4.63	34.49										
849	4.55	34.47										
874	4.47	34.49										
898	4.40	34.48										
923	4.36	34.49										
947	4.26	34.47										
972	4.20	34.51										
997	4.12	34.50										
1022	4.08	-										
110.35	CREST; February 10, 1951; 0509 GCT; 29°47'N, 116°02'W; sounding, 280 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 20°.											
0	14.56		4.96		0	14.56		4.96				
9	14.56		4.98		10	14.56		4.98				
23	14.50		4.91		20	14.53		4.96				
48	11.90		4.20		30	14.43		4.77				
70	10.68		3.74		50	11.86		4.13				
94	10.03		3.30		75	10.50		3.65				
143	9.32		2.47		100	9.94		3.20				
188	9.04		2.08		150	9.27		2.38				
234	9.18		1.34		200	9.05		1.95				
281	8.80		0.82		250	9.10		1.08				
338	8.29		0.60		300	8.63		0.73				

a) Test cast.

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

110.40

CREST; February 10, 1951; 0846 GCT; 29°36'N, 116°23'W; sounding, 1410 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 27°.

0	14.48	5.07	0	14.48	5.07
8	14.47	5.29	10	14.47	5.29
22	14.45	5.06	20	14.46	5.10
49	12.12	4.71	30	14.41	4.93
70	10.94	4.45	50	12.07	4.69
96	10.28	3.74	75	10.77	4.35
140	9.54	2.60	100	10.20	3.60
184	9.22	2.11	150	9.44	2.47
270	8.34	1.24	200	9.10	1.96
362	7.82	0.46	250	8.59	1.44
451	6.94	0.35	300	8.12	0.97
546	6.18	0.30	400	7.49	0.35
731	5.36	0.27	500	6.53	0.32
927	4.46	0.47	600	5.88	0.30
1131	3.73	0.69	700	5.48	0.27
			800	5.07	0.31
			1000	4.17	0.57

110.50

CREST; February 10, 1951; 1440 GCT; 29°15'N, 117°04'W; sounding, 1800 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 12°.

0	15.74	5.20	0	15.74	5.20
10	15.74	5.46	10	15.74	5.46
24	15.72	5.54	20	15.73	5.53
49	15.59	5.18	30	15.70	5.53
73	15.34	5.40	50	15.59	5.18
98	12.68	5.50	75	15.32	5.42
152	10.23	3.63	100	12.40	5.50
199	9.12	2.76	150	10.77	3.70
294	8.10	1.55	200	9.12	2.74
393	7.20	0.80	250	8.52	2.08
487	6.54	0.42	300	8.05	1.50
587	5.85	0.39	400	7.14	0.77
781	4.86	0.37	500	6.44	0.40
976	4.18	0.57	600	5.77	0.39
1180	3.60	0.77	700	5.24	0.38
			800	4.77	0.37
			1000	4.10	0.60

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

110.60

CREST; February 10, 1951; 2006, 2113 GCT; 28°54'N, 117°46'W; sounding, 2022 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 07°, 09°.

0	16.26	4.86	0	16.26	4.86
10	16.26	5.03	10	16.26	5.03
25	16.24	5.03	20	16.25	5.05
50	16.24	4.87	30	16.24	5.00
74	16.15	5.61	50	16.24	4.87
99	12.89	4.38	75	16.12	5.61
152	11.09	1.48	100	12.80	4.38
201	10.36	1.59	150	11.14	1.49
298	9.33	0.75	200	10.37	1.58
397	8.44	0.46	250	9.81	1.23
492	7.31	0.42	300	9.31	0.74
593	6.40	0.37	400	8.42	0.45
789	5.14	0.29	500	7.23	0.40
982	4.28	0.50	600	6.34	0.37
1188	3.76	0.62	700	5.67	0.33
			800	5.07	0.30
977a)	4.28	0.46	1000	4.19	0.51
1175	3.74	0.69	1200	3.71	0.67
1488	3.02	0.96	1500	2.99	0.98
1717	2.53	1.30	2000	2.18	1.63
1967	2.21	1.59	2500	1.80	2.06
2219	1.96	1.87	3000	1.66	2.28
2474	1.82	2.05			
2739	1.73	2.25			
3036	1.66	2.29			

110.70

CREST; February 11, 1951; 0249 GCT; 28°37'N, 118°18'W; sounding, 1800 fm; wind, 280°, force 4; weather, partly cloudy; sea, rough; wire angle, 17°.

0	16.38	5.53	0	16.38	5.53
11	16.39	5.46	10	16.39	5.46
24	16.40	5.33	20	16.40	5.37
52	16.45	5.20	30	16.43	5.30
76	16.36	5.24	50	16.45	5.20
105	12.84	4.96	75	16.37	5.24
137	11.38	4.05	100	13.65	5.03
207	10.46	1.64	150	11.15	3.51
309	8.80	1.07	200	10.55	1.83
417	7.96	0.42	250	9.82	1.26
521	6.78	0.27	300	8.98	1.09
623	5.92	0.28	400	8.07	0.55
829	4.62	0.46	500	7.06	0.28
1037	3.87	0.63	600	6.10	0.27
1240	3.32	0.86	700	5.41	0.31
			800	4.79	0.42
			1000	3.99	0.62

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

110.80

CREST; February 11, 1951; 0823 GCT; 28°15'N, 118°57'W; sounding, 2200 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 18°.

0	16.68	4.57	0	16.68	4.57
10	16.68	5.11	10	16.68	5.11
24	16.62	5.11	20	16.62	5.12
47	16.56	5.24	30	16.61	5.14
71	14.66	5.10	50	16.55	5.22
94	12.42	5.06	75	13.95	5.08
144	10.14	3.71	100	12.08	5.02
189	9.32	2.70	150	10.00	3.55
276	8.70	1.35	200	9.23	2.48
368	8.00	0.52	250	8.86	1.69
459	7.07	0.44	300	8.53	1.07
552	5.96	0.37	400	7.69	0.46
738	5.00	0.36	500	6.61	0.39
927	4.26	0.53	600	5.64	0.36
1125	3.66	0.76	700	5.16	0.36
			800	4.73	0.40
			1000	4.02	0.62

110.90

CREST; February 11, 1951; 1424 GCT; 27°53'N, 119°35'W; sounding, 2150 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 17°.

0	18.24	4.94	0	18.24	4.94
10	18.27	4.99	10	18.27	4.99
24	18.26	4.81	20	18.27	4.82
48	18.27	4.94	30	18.26	4.85
64p	18.26	5.07	50	18.26	4.98
71	18.28	4.98	75	18.28	4.80
94	13.57	4.33	100	13.00	4.22
232p	8.76	2.37	150	10.90	3.36
361p	7.16	1.27	200	9.46	2.72
456p	6.34	0.59	250	8.53	2.22
562p	5.87	0.45	300	7.88	1.77
753p	4.79	0.39	400	6.79	0.98
945p	4.12	0.59	500	6.13	0.47
1150p	3.60	0.77	600	5.69	0.44
			700	5.11	0.40
			800	4.60	0.43
			1000	3.98	0.66

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OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

110.100

CREST; February 11, 1951; 1918, 2045 GCT; 27°31'N, 120°14'W; sounding, 2170 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 00°, 00°.

0	16.90	5.32	0	16.90	5.32
10	16.74	4.95	10	16.74	4.95
25	16.50	5.32	20	16.57	5.20
50	16.79	5.54	30	16.50	5.44
74	13.16	5.37	50	16.79	5.54
99	11.94	4.76	75	13.05	5.37
153	9.67	4.09	100	11.90	4.74
201	8.88	2.93	150	9.73	4.13
297	7.86	1.52	200	8.90	2.93
399	6.70	0.81	250	8.34	2.13
496	5.98	0.51	300	7.83	1.48
597	5.37	0.44	400	6.68	0.81
796	4.57	0.46	500	5.95	0.49
991	3.94	0.67	600	5.36	0.44
1194	3.44	0.87	700	4.88	0.45
			800	4.55	0.46
600a)	5.36	0.47	1000	3.91	0.68
991	3.94	0.65	1200	3.44	0.91
1188	3.46	0.91	1500	2.74	1.27
1486	2.78	1.26	2000	2.09	1.94
1733	2.39	1.57	2500	1.76	2.48
1987	2.10	1.90	3000	1.65	2.66
2239	1.90	2.50			
2493	1.76	2.48			
2760	1.68	2.68			
3059	1.63	2.64			

110.100

CREST; February 11, 1951; 2217 GCT;[b] 27°31'N, 120°14'W; sounding, 2170 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 00°.

676	5.11
701	5.04
725	4.88
749	4.79
775	4.69
800	4.58
824	4.48
850	4.42
874	4.31
898	4.18
923	4.14
949	4.08
973	4.04
997	3.96
1022	3.88

a) Overlapping casts; reconciliation of property curves when necessary.
b) Test cast.

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

113.35 CREST; February 9, 1951; 2313 GCT; 29°11'N, 115°38'W; sounding, 550 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 15°.

0	14.66	4.80	0.57	0	14.66	4.80	0.57
9	14.60	4.94	0.58	10	14.60	4.95	0.58
23	14.36	5.18	0.60	20	14.40	5.16	0.60
48	13.46	5.24	0.79	30	14.34	5.23	0.62
71	11.48	4.44	1.20	50	13.15	5.23	0.80
95	10.62	3.51	1.57	75	11.25	4.20	1.27
147	9.53	3.01	-	100	10.51	3.44	1.61
193	9.64	1.79	2.23	150	9.53	2.94	1.96
239	9.52	1.17	2.54	200	9.64	1.68	2.28
285	9.16	0.91	2.80	250	9.45	1.09	2.62
385	7.94	0.51	3.01	300	9.00	0.85	2.84
484	7.06	0.33	-	400	7.78	0.48	3.04
585	6.14	0.27	3.19	500	6.93	0.32	3.15
680	5.73	0.25	-	600	6.04	0.26	
783	5.16	0.31	-	700	5.64	0.25	
				800	(5.07)		

113.40 CREST; February 9, 1951; 1937 GCT; 29°01'N, 115°58'W; sounding, 1040 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 15°.

0	15.57	5.18	0	15.57	5.18	
9	15.38	4.95	10	15.36	4.95	
24	15.10	5.58	20	15.15	5.56	
48	13.96	5.29	30	15.07	5.55	
71	12.29	4.85	50	13.40	5.25	
96	12.22	4.04	75	12.27	4.72	
147	9.72	3.20	100	12.18	3.95	
194	8.97	2.46	150	9.63	3.15	
285	8.25	1.26	200	8.92	2.38	
382	7.53	0.69	250	8.48	1.65	
475	6.79	0.36	300	8.11	1.13	
569	6.30	0.31	400	7.38	0.62	
765	5.17	0.30	500	6.64	0.32	
956	4.30	0.46	600	6.13	0.30	
1145	3.66	0.64	700	5.55	0.30	
			800	4.99	0.32	
			1000	4.14	0.50	

113.50 CREST; February 9, 1951; 1346 GCT; 28°41'N, 116°37'W; sounding, 1850 fm; wind, 350°, force 3; weather, cloudy; sea, rough; wire angle, 08°.

0	15.91	4.81	0	15.91	4.81	
10	15.90	5.02	10	15.90	5.02	
25	15.88	5.11	20	15.89	5.07	
49	15.48	5.15	30	15.76	5.12	
74	14.24	4.67	50	15.47	5.15	
98	11.64	3.69	75	14.24	4.58	
151	10.28	2.34	100	11.52	3.60	
199	10.69	1.07	150	10.27	2.36	
294	9.16	0.81	200	10.68	1.07	
393	7.78	0.49	250	9.92	0.86	
488	6.84	0.40	300	9.06	0.78	
546	6.48	0.35	400	7.69	0.47	
786	4.95	0.30	500	6.77	0.39	
983	4.16	0.56	600	6.12	0.34	
1190	3.62	0.70	700	5.50	0.31	
			800	4.87	0.30	
			1000	4.10	0.58	

S10

CCOFI
5102

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

113.60

CREST; February 9, 1951; 0753 GCT; 28°22'N, 117°16.5'W; sounding, 2000 fm; wind, 320°, force 2; weather, cloudy; sea, rough; wire angle, 10°.

0	15.98	4.76	0.48	0	15.98	4.76	0.48
10	15.99	5.28	0.45	10	15.99	5.28	0.45
24	15.80	5.05	0.49	20	15.87	5.05	0.47
48	15.36	5.37	0.52	30	15.69	5.09	0.50
73	13.38	5.45	0.65	50	15.31	5.37	0.52
97	12.14	4.78	0.93	75	13.25	5.45	0.66
149	10.30	3.52	1.56	100	12.03	4.63	0.98
197	9.46	2.41	2.09	150	10.29	3.50	1.57
292	8.84	1.11	2.61	200	9.42	2.35	2.12
389	8.02	0.49	2.78	250	9.04	1.60	2.47
483	7.33	0.31	-	300	8.78	1.04	2.62
581	6.48	0.23	3.13	400	7.92	0.45	2.80
774	5.05	0.34	-	500	7.17	0.27	3.06
966	4.28	0.51	3.20	600	6.32	0.24	(3.14)
1169	3.70	0.71	3.08	700	5.56	0.28	(3.18)
				800	4.91	0.37	(3.19)
				1000	4.16	0.55	3.19

113.70

CREST; February 9, 1951; 0224 GCT; 28°02'N, 117°55.5'W; sounding, 2000 fm; wind, 320°, force 1; weather, cloudy; sea, rough; wire angle, 03°.

0	16.38	5.55	0.61	0	16.38	5.55	0.61
10	16.16	4.98	-	10	16.16	4.98	0.64
26	16.07	4.80	0.58	20	16.09	4.83	0.61
51	15.96	5.00	0.59	30	16.05	4.81	0.58
74	15.37	5.13	0.57	50	15.97	5.00	0.59
100	12.62	5.10	0.83	75	15.36	5.13	0.57
153	11.16	2.55	1.88	100	12.62	5.10	0.83
201	9.24	2.94	1.90	150	11.24	2.56	1.88
297	8.46	1.37	2.50	200	9.25	2.94	1.90
398	7.66	0.55	2.85	250	8.74	2.20	2.16
494	6.94	0.29	2.95	300	8.44	1.33	2.52
594	6.00	0.29	3.01	400	7.65	0.54	2.85
793	4.86	0.37	3.04	500	6.89	0.29	2.95
989	4.14	0.53	3.02	600	5.96	0.30	3.01
1195	3.55	0.85	2.97	700	5.35	0.34	3.02
				800	4.82	0.37	3.04
				1000	4.10	0.55	3.02

117.35

CREST; February 8, 1951; 0045 GCT; 28°41'N, 115°14'W; sounding, 104 fm; wind, 320°, force 3; weather, fog; sea, moderate; wire angle, 14°.

0	15.04	5.55	0.62	0	15.04	5.55	0.62
9	15.03	5.24	-	10	15.02	5.25	0.63
24	14.78	5.49	0.63	20	14.79	5.48	0.63
48	12.60	4.16	1.25	30	14.76	5.38	0.64
75	11.89	2.96	1.73	50	12.49	4.04	1.34
100	11.16	2.70	1.80	75	11.89	2.96	1.73
146	10.15	1.87	-	100	11.16	2.70	1.80
				150	(10.08)	(1.76)	

117.40

CREST; February 8, 1951; 0451 GCT; 28°28'N, 115°38'W; sounding, 550 fm; wind, 320°, force 2; weather, fog; sea, moderate; wire angle, 11°.

0	14.44	5.46	0.53	0	14.44	5.46	0.53
10	14.29	5.48	0.51	10	14.29	5.48	0.51
25	14.20	-	-	20	14.22	5.31	0.57
49	12.52	4.49	0.97	30	14.17	5.03	0.70
73	10.76	3.74	1.47	50	12.42	4.46	1.01
98	10.23	3.14	1.72	75	10.68	3.68	1.52
				100	(10.20)	(3.08)	(1.73)

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; February 8, 1951; 1032 GCT; 28°08'N, 116°17'W; sounding, 2200 fm; wind, 320°, force 2; weather, fog; sea, moderate; wire angle, 03°. 117.50

0	15.24	4.96	0.60	0	15.24	4.96	0.60
10	15.22	5.43	0.63	10	15.22	5.43	0.63
24	15.06	5.22	0.66	20	15.13	5.30	0.65
52	12.34	4.31	1.14	30	15.00	5.05	0.70
76	11.26	3.59	1.43	50	12.87	4.40	1.11
103	10.65	2.81	1.82	75	11.26	3.65	1.43
155	9.77	1.99	2.17	100	10.72	2.93	1.79
203	9.51	1.37	2.44	150	9.85	2.06	2.14
299	8.84	0.66	-	200	9.53	1.41	2.42
402	7.71	0.39	2.99	250	9.21	0.95	(2.63)
499	6.63	0.29	3.11	300	8.82	0.65	(2.80)
602	6.02	0.26	3.16	400	7.75	0.40	(2.99)
802	4.67	0.38	3.22	500	6.63	0.29	3.11
1000	4.06	0.53	3.17	600	6.04	0.26	3.16
1240	3.48	0.80	3.16	700	5.41	0.30	3.18
				800	4.68	0.39	3.22
				1000	4.06	0.53	3.17

CREST; February 8, 1951; 1616 GCT; 27°47'N, 116°58'W; sounding, 2100 fm; wind, 020°, force 2; weather, overcast; sea, very rough; wire angle, 06°. 117.60

0	15.34	5.18	0.56	0	15.34	5.18	0.56
10	15.32	4.21u	0.59	10	15.32		0.59
25	15.28	5.37	0.58	20	15.30		0.59
49	15.23	5.17	0.63	30	15.27	5.37	0.59
74	12.30	4.47	-	50	15.23	5.17	(0.63)
99	11.14	3.17	-	75	12.27	4.45	
				100	(11.14)	(3.17)	

CREST; February 8, 1951; 2048 GCT; 27°31'N, 117°29'W; sounding, 2050 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 00°. 117.70

0	16.42	4.85	0.51	0	16.42	4.85	0.51
10	16.18	4.70	0.47	10	16.18	4.70	0.47
25	16.18	4.98	0.46	20	16.18	4.85	0.46
50	16.10	4.89	0.47	30	16.17	4.99	0.46
75	15.72	5.01	0.52	50	16.10	4.89	0.47
99	12.54	4.65	0.89	75	15.72	5.01	0.52
153	10.36	2.63	1.80	100	12.50	4.62	0.89
201	10.58	1.31	2.22	150	10.37	2.77	1.77
297	9.04	0.87	2.59	200	10.58	1.32	2.22
398	7.93	0.47	2.73	250	9.81	0.99	2.43
493	7.26	0.24	2.87	300	8.99	0.85	2.60
593	6.04	0.25	2.97	400	7.91	0.46	2.74
792	5.03	0.28	3.03	500	7.21	0.24	2.88
989	4.22	0.45	2.99	600	5.98	0.25	2.97
1193	3.56	0.63	2.91	700	5.44	0.26	3.01
				800	5.00	0.29	3.03
				1000	4.18	0.45	2.99

CREST; February 14, 1951; 0417 GCT; 28°03'N, 114°54'W; sounding, 47 fm; wind, direction missing, force 4; weather, partly cloudy; sea, missing; wire angle, 00°. 120.35

0	15.77	5.45	0.55	0	15.77	5.45	0.55
10	15.77	5.50	0.48	10	15.77	5.50	0.48
25	15.73	5.53	0.52	20	15.76	5.53	0.49
50	15.40	5.57	0.57	30	15.69	5.55	0.53
75	11.84	2.09	1.97	50	15.40	5.57	0.57
				75	11.84	2.09	1.97

S10

CCOFI 5102

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

120.45

CREST; February 13, 1951; 2243 GCT; 27°43'N, 115°33'W; sounding, 1700 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°.

0	15.42	5.24	0	15.42	5.24
10	15.30	5.32	10	15.30	5.32
24	15.15	5.05	20	15.20	5.25
48	13.15	3.46	30	15.10	4.75
72	12.00	2.55	50	13.15	3.38
95	10.78	2.59u	75	11.86	2.49
147	10.40	1.37	100	10.67	2.05
194	10.70	0.69	150	10.40	1.34
285	9.28	0.56	200	10.70	0.67
381	8.10	0.40	250	9.92	0.57
474	7.08	0.34	300	9.06	0.55
572	6.02	0.31	400	7.88	0.37
764	5.02	0.35	500	6.79	0.34
954	4.25	0.48	600	5.80	0.31
1154	3.68	0.70	700	5.29	0.31
			800	4.88	0.39
			1000	4.10	0.50

120.50

CREST; February 13, 1951; 1831 GCT; 27°32'N, 115°51'W; sounding, 2200 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 20°.

0	15.62	4.77	0	15.62	4.77
10	15.59	5.08	10	15.59	5.08
24	15.59	5.11	20	15.59	5.10
51	15.56	5.00	30	15.59	5.08
75	12.55	2.75	50	15.57	5.02
102	12.38	1.11	75	12.55	2.75
151	11.56	0.80	100	12.39	1.16
199	10.76	0.72	150	11.57	0.80
294	9.48	0.47	200	10.75	0.72
396	8.14	0.33	250	10.05	0.60
492	7.38	0.29	300	9.40	0.45
590	6.58	0.20	400	8.10	0.32
785	5.05	0.32	500	7.30	0.28
983	4.11	0.48	600	6.52	0.20
1183	3.60	0.70	700	5.73	0.25
			800	4.94	0.35
			1000	4.05	0.50

120.60

CREST; February 13, 1951; 1256 GCT; 27°13'N, 116°28'W; sounding, 2050 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 30°.

0	15.67	4.76	0	15.67	4.76
8	15.68	5.32	10	15.67	5.31
21	15.65	5.30	20	15.66	5.31
48	15.64	5.48	30	15.65	5.36
69	12.08	5.04	50	15.64	5.47
95	11.04	3.42	75	11.60	4.82
			100	(10.97)	(3.15)

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; February 13, 1951; 0630 GCT; 26°51'N, 117°07'W; sounding, 2100 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 20°. 120.70

0	15.30	5.32	0	15.30	5.32
10	15.28	5.21	10	15.28	5.21
23	15.22	5.58	20	15.24	5.57
51	14.36	5.35	30	15.23	5.54
74	13.08	4.87	50	14.50	5.35
100	11.56	3.77	75	13.06	4.83
144	10.13	2.50	100	11.56	3.77
187	9.31	2.22	150	10.02	2.45
272	9.01	0.93	200	9.23	2.09
364	8.22	0.31	250	9.05	1.28
453	7.30	0.29	300	8.86	0.63
544	6.23	0.37	400	7.87	0.30
730	5.22	0.32	500	6.73	0.34
924	4.37	0.43	600	5.85	0.37
1123	3.70	0.71	700	5.36	0.34
			800	4.92	0.34
			1000	4.08	0.51

CREST; February 13, 1951; 0026 GCT; 26°28'N, 117°50'W; sounding, 2100 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 14°. 120.80

0	17.74	5.04	0	17.74	5.04
9	17.76	5.16	10	17.76	5.16
24	17.78	5.20	20	17.77	5.19
54	17.84	5.16	30	17.80	5.19
76	15.26	5.54u	50	17.83	5.17
104	12.18	4.90	75	15.50	5.09
154	10.88	2.96	100	12.38	4.94
203	9.57	2.33	150	10.98	3.23
301	7.33	1.46	200	9.65	2.37
406	6.75	0.61	250	8.42	1.92
505	6.48	0.37	300	7.36	1.46
606	5.68	0.35	400	6.78	0.65
804	4.72	0.42	500	6.49	0.37
1010	3.97	0.69	600	5.72	0.35
1209	3.50	0.84	700	5.15	0.36
			800	4.74	0.42
			1000	4.00	0.68

CREST; February 12, 1951; 1845 GCT; 26°13'N, 118°28'W; sounding, 2200 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 28°. 120.90

0	17.57	5.49	0	17.57	5.49
8	17.58	5.27	10	17.58	5.26
22	17.58	5.18	20	17.58	5.18
48	17.57	5.52	30	17.58	5.22
70	16.78	5.43	50	17.56	5.51
96	13.68	5.30	75	16.65	5.40
143	10.30	4.18	100	12.50	5.24
187	9.74a)	2.49	150	10.19	3.95
278	8.40	1.33	200	9.60	2.27
372	7.38	0.68	250	8.87	1.62
462	6.20	0.49	300	8.14	1.15
556	5.62	0.36	400	7.04	0.59
738	4.76	0.40	500	5.92	0.44
928	4.16	0.59	600	5.42	0.36
1124	3.71	0.76	700	4.94	0.39
			800	4.54	0.45
			1000	4.00	0.67

a) Mean value of 9.69 and 9.80°C.

SIO

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5102

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

120.100

CREST; February 12, 1951; 1039, 1224 GCT; 25°53'N, 119°06'W; sounding, 2200 fm; wind, 320°, force 3; weather, intermittent moderate drizzle; sea, missing; wire angle, 15°, 21°.

0	17.09	4.79	0	17.09	4.79	
9	17.10	-	10	17.10	4.46	
25	17.08	4.26	20	17.09	4.27	
48	16.91	4.98	30	17.07	4.29	
72	16.02	5.01	50	16.87	5.00	
96	13.88	5.08	75	15.83	5.04	
149	10.62	3.84	100	13.45	5.07	
195	9.08	3.22	150	10.48	3.83	
286	9.02	0.96	200	9.07	3.17	
381	7.89	0.88	250	9.05	2.10	
473	6.99	0.24	300	8.95	0.90	
571	6.34	0.34	400	7.64	0.83	
758	5.16	0.46	500	6.79	0.25	
948	4.32	0.63	600	6.16	0.30	
1147	3.76	-	700	5.53	0.45	
			800	4.94	0.51	
600a)	6.16	0.27	1000	4.12	0.67	
1003	4.11	0.53	1200	3.59	0.77	
1251	3.39	0.80	1500	2.89	1.12	
1528	2.80	1.14	2000	2.16	1.80	
1765	2.40	1.53	2500	1.79	2.20	
2044	2.12	1.84	3000	1.66	2.48	
2292	1.92	2.10				
2559	1.76	2.22				
2856	1.68	2.43				
3204	1.62	2.48				

123.40

CREST; February 18, 1951; 0708 GCT; 27°18'N, 114°51.5'W; sounding, 300 fm; wind, 300°, force 3; weather, partly cloudy; sea, rough; wire angle, 11°.

0	16.86	5.48	0.57	0	16.86	5.48	0.57
10	16.84	5.41	0.55	10	16.84	5.41	0.55
25	15.45	5.25	-	20	15.60	5.31	0.58
49	13.64	4.32	1.17	30	15.41	5.15	0.72
73	11.34	3.04	1.78	50	13.60	4.25	1.17
96	10.95	2.84	1.93	75	11.25	3.02	1.79
148	10.60	2.14	-	100	10.90	2.82	1.95
194	9.48	1.95	2.49	150	10.57	2.13	2.22
240	10.18	0.76	-	200	9.47	1.80	(2.53)
287	9.74	0.53	-	250	10.19	0.69	(2.78)
340	9.09	0.36	2.96	300	9.58	0.48	(2.90)
386	8.43	0.28	-	400	8.25	0.27	3.04
438	7.88	0.27	3.08	500	(7.23)	(0.22)	
482	7.40	0.22	3.16				

123.50

CREST; February 18, 1951; 1249 GCT; 26°58'N, 115°31'W; sounding, 2100 fm; wind, 310°, force 4; weather, partly cloudy; sea, rough; wire angle, 21°.

0	16.04	5.74	0.47	0	16.04	5.74	0.47
9	16.02	5.72	0.49	10	16.02	5.72	0.49
23	15.67	5.49	0.64	20	15.76	5.55	0.58
51	12.34	3.77	-	30	15.56	5.15	0.73
74	11.57	2.78	1.86	50	13.07	3.95	1.40
102	11.02	1.90	2.22	75	11.56	2.76	1.86
				100	11.10	1.95	2.19

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; February 18, 1951; 1916 GCT; 26°37'N, 116°12'W; sounding, 2150 fm; wind, 310°, force 2; weather, partly cloudy; sea, rough; wire angle, 25°.							123.60
0	17.84	4.77	0.44	0	17.84	4.77	0.44
8	17.82	5.09	0.43	10	17.80	5.09	0.43
22	17.76	5.04	0.43	20	17.76	5.07	0.43
45	17.78	4.83	0.46	30	17.78	4.95	0.44
60	17.74	5.03	0.42	50	17.76	4.85	0.45
75	17.77	5.02	0.43	75	17.77	5.02	0.43
102	14.09	5.06	0.43	100	14.55	5.05	0.43
131	11.82a)	5.01	0.84	150	11.17	4.31	1.46
191	9.94	1.80	2.29	200	9.80	1.65	2.37
259	8.97	1.03	2.67	250	9.09	1.10	2.64
326	8.28	0.60	-	300	8.55	0.74	(2.78)
400	7.32	0.47	-	400	7.32	0.47	(2.99)
557	6.22	0.34	3.20	500	6.62	0.39	(3.13)
726	5.02	0.32	3.21	600	5.89	0.34	3.20
898	4.46	0.42	-	700	5.19	0.32	3.21
				800	4.70	0.35	
CREST; February 19, 1951; 1254 GCT; 26°43.5'N, 114°29.5'W; sounding, 1600 fm; wind, 280°, force 5; weather, partly cloudy; sea, rough; wire angle, 30°.							127.40
0	17.03	5.26	0.58	0	17.03	5.26	0.58
8	17.04	5.17	0.56	10	17.02	5.17	0.56
21	17.01	5.22	0.59	20	17.00	5.20	0.58
46	12.96	3.92	1.29	30	16.48	5.20	0.65
68	11.98	3.03	1.58	50	12.67	3.65	1.36
93	10.48	3.11u	1.72	75	11.65		1.67
				100	(10.39)		(1.78)
CREST; February 19, 1951; 0640 GCT; 26°23.5'N, 115°08'W; sounding, 1950 fm; wind, 280°, force 5; weather, partly cloudy; sea, rough; wire angle, 38°.							127.50
0	16.74	4.95	0.37	0	16.74	4.95	0.37
8	16.73	5.43	0.40	10	16.72	5.43	0.39
20	15.98	5.29	0.37	20	15.98	5.29	0.37
43	15.06	-	0.41	30	15.80	5.14	0.38
63	13.77	5.49	-	50	15.60	4.93	0.42
85	11.29	4.34	0.45	75	11.51	4.66	0.86
CREST; February 19, 1951; 0042 GCT; 26°03.5'N, 115°46.5'W; sounding, 2050 fm; wind, 310°, force 3; weather, cloudy; sea, rough; wire angle, 18°.							127.60
0	17.90	5.09	0.44	0	17.90	5.09	0.44
10	17.87	5.16	0.42	10	17.87	5.16	0.42
24	17.84	5.22	0.46	20	17.85	5.20	0.45
48	17.82	5.19	0.46	30	17.83	5.21	0.46
71	17.84	5.17	0.46	50	17.82	5.19	0.46
94	16.57	-	0.43	75	17.83		0.46
				100	(15.88)		(0.44)

a) Mean value of 11.76 and 11.87°C.

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OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

130.35 CREST; February 20, 1951; 0837 GCT; 26°20'N, 113°50'W; sounding, 360 fm; wind, 030°, force 5; weather, partly cloudy; sea, rough; wire angle, 15°.

0	17.00	5.57	0.55	0	17.00	5.57	0.55
10	17.02	5.41	0.56	10	17.02	5.41	0.56
24	17.02	5.43	0.60	20	17.02	5.42	0.58
72	12.18	4.18	1.38	30	17.01	5.43	0.66
96	11.24	3.49	1.65	50	16.28	4.83	1.06
131	10.42	1.93	2.36	75	11.98	4.13	1.41
148	10.22	1.82	2.32	100	11.16	3.37	1.71
196	9.69	1.38	2.55	150	10.20	1.82	2.32
240	9.64	0.53	2.82	200	9.67	1.31	2.58
287	9.57	0.26	2.97	250	9.61	0.46	2.86
336	8.80	0.31	3.04	300	9.46	0.25	2.99
383	8.66	0.19	3.10	400	8.55	0.19	3.09
429	8.34	0.26	-	500	7.19	0.21	
477	7.43	0.21	3.14				
578	6.70	0.21	-				

130.40 CREST; February 20, 1951; 1222 GCT; 26°10'N, 114°10'W; sounding, 2000 fm; wind, 030°, force 3; weather, partly cloudy; sea, rough; wire angle, 15°.

0	16.94	5.12	0.60	0	16.94	5.12	0.60
10	16.95	4.99	0.58	10	16.95	4.99	0.58
24	16.94	4.87	0.62	20	16.95	4.90	0.60
53	13.82	3.86	1.28	30	16.95	4.79	0.79
74	12.08	3.15	1.59	50	14.25	3.98	1.22
106	10.86	2.75	1.98	75	12.04	3.14	1.59
158	9.98	1.91	2.41	100	11.05	2.79	1.91
209	10.32	0.80	-	150	9.98	2.04	2.36
312	9.13	0.29	3.01	200	10.26	0.95	(2.74)
418	7.82	0.30	3.11	250	10.08	0.50	(2.90)
521	6.62	0.27	3.23	300	9.33	0.32	(2.99)
623	5.82	0.27	-	400	8.03	0.30	3.10
823	4.77	0.40	3.31	500	6.87	0.28	3.20
1027	4.10	0.53	-	600	5.98	0.27	
1229	3.60	0.85	-	700	5.38	0.30	
				800	4.88	0.38	
				1000	4.17	0.50	

130.50 CREST; February 20, 1951; 1750 GCT; 25°50'N, 114°51'W; sounding, 2000 fm; wind, 350°, force 4; weather, cloudy; sea, very rough; wire angle, 40°.

0	17.41	5.14	0.37	0	17.41	5.14	0.37
8	17.44	5.17	0.41	10	17.44	5.18	0.42
20	17.42	5.19	0.45	20	17.42	5.19	0.45
43	17.33	5.25	0.41	30	17.40	5.21	0.44
62	14.50	5.38	0.58	50	16.95	5.31	0.42
83	13.12	4.87	0.68	75	13.52	5.25	0.65
121	10.98	3.37	1.42	100	12.29	4.15	0.88
157	9.35	3.54u	1.59	150	9.55	2.82	1.56
230	8.90	1.67	2.03	200	8.98	2.08	1.82
308	9.44	0.40	2.48	250	8.98	1.32	2.18
382	8.46	0.32	2.52	300	9.45	0.47	2.47
458	7.56	0.27	2.70	400	8.24	0.31	2.54
611	6.12	0.21	3.06	500	7.14	0.25	2.81
780	5.17	0.32	2.89	600	6.21	0.21	3.05
964	4.42	0.43	2.85	700	5.58	0.25	2.99
				800	5.09	0.34	2.87
				1000	(4.30)	(0.41)	(2.85)

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; February 20, 1951; 2342 GCT; 25°31'N, 115°25'W; sounding, 2000 fm; wind, 010°, force 3; weather, cloudy; sea, very rough; wire angle, 13°. 130.60

0	17.84	5.49	0.43	0	17.84	5.49	0.43
9	17.70	5.51	0.42	10	17.70	5.50	0.42
24	17.61	5.40	0.43	20	17.63	5.44	0.42
49	17.52	5.49	0.44	30	17.58	5.40	0.43
74	17.34	5.53	0.44	50	17.52	5.49	0.44
97	13.01	5.51	0.48	75	17.31	5.53	0.44
149	10.62	3.45	1.71	100	12.65	5.49	0.49
195	12.15	0.42	2.71	150	10.62	3.41	1.72
285	10.95	0.29	2.73	200	12.15	0.39	2.72
379	9.41	0.29	2.88	250	11.50	0.30	2.74
467	7.88	0.30	2.95	300	10.75	0.30	2.74
561	6.76	0.30	2.98	400	9.00	0.30	2.91
747	5.28	0.28	3.13	500	7.47	0.30	2.95
936	4.50	0.39	-	600	6.40	0.29	2.99
1139	3.83	0.63	-	700	5.62	0.28	3.07
				800	5.02	0.28	
				1000	4.29	0.41	

CREST; February 21, 1951; 0532 GCT; 25°10'N, 116°03'W; sounding, 2100 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 05°. 130.70

0	17.10	5.22	0	17.10	5.22	
10	17.12	4.76	10	17.12	4.76	
25	17.09	4.96	20	17.11	4.83	
55	16.75	-	30	17.07	(5.01)	
79	15.62	5.22	50	16.97	(5.15)	
108	12.93	4.73	75	15.75	(5.23)	
161	10.02	2.76	100	14.10	4.95	
215	10.23	1.16	150	10.03	3.20	
316	9.56	-	200	10.24	1.50	
426	7.76	0.36	250	10.09	(0.86)	
529	6.88	0.26	300	9.70	(0.64)	
633	6.09	0.27	400	8.25	(0.40)	
835	4.96	0.30	500	7.09	0.28	
1041	4.11	0.51	600	6.34	0.26	
1242	3.54	0.80	700	5.68	0.29	
			800	5.14	0.30	
			1000	4.26	0.47	

CREST; February 21, 1951; 1107 GCT;[a] 24°48.5'N, 116°40'W; sounding, 2100 fm; wind, 360°, force 3; weather, partly cloudy; sea, smooth; wire angle, 10°. 130.80

665	5.79
691	5.65
713	5.54
738	5.37
762	5.20
786	5.10
809	4.96
833	4.88
857	4.76
881	4.62
906	4.51
930	4.46
956	4.35
979	4.24
1004	4.16

a) Test cast.

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OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
130.80	CREST; February 21, 1951; 1232, 1252 GCT; 24°48.5'N, 116°40'W; sounding, 2100 fm; wind, 360°, force 3; weather, partly cloudy; sea, very rough; wire angle, 07°, 15°.						
0	17.47	5.01	0.48	0	17.47	5.01	0.48
10	17.48	4.45	0.45	10	17.48	4.45	0.45
25	17.49	4.58	0.49	20	17.49	4.57	0.48
50	17.24	4.45	0.44	30	17.48	4.56	0.48
74	16.44	4.45	0.48	50	17.24	4.45	0.44
99	15.71	4.63	0.55	75	16.40	4.45	0.48
148	12.06	4.32	1.44	100	15.67	4.62	0.56
201	11.12	1.28	2.70	150	12.01	4.29	1.50
				200	11.14	1.30	2.70
287	9.52	0.62	2.91	250	10.25	0.84	2.86
381	8.32	0.35	3.22	300	9.34	0.57	2.93
472	7.27	0.23	3.04u	400	8.10	0.30	
568	6.36	0.23	3.23	500	7.00	0.23	
760	5.27	0.18	3.22	600	6.15	0.22	3.23
953	4.31	0.30	3.24	700	5.58	0.20	3.22
1158	3.74	0.41	3.29	800	5.08	0.20	3.22
				1000	4.14	0.35	3.26
133.30	CREST; February 22, 1951; 1753 GCT; 25°54.5'N, 113°07.5'W; sounding, 106 fm; wind, 350°, force 1; weather, cloudy; sea, moderate; wire angle, 00°.						
0	17.00	5.48	0.56	0	17.00	5.48	0.56
10	16.96	5.46	0.56	10	16.96	5.46	0.56
25	16.94	5.48	0.54	20	16.95	5.48	0.55
50	16.48	5.49	-	30	16.92	5.48	0.52
74	13.32	2.88	1.66	50	16.48	5.49	0.51
98	12.08	2.77	1.83	75	13.28	2.88	1.66
152	11.55	0.43	2.63	100	12.05	2.77	1.84
				150	11.57	0.53	2.56
133.40	CREST; February 22, 1951; 1234 GCT; 25°33'N, 113°44'W; sounding, 1500 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 30°.						
0	17.61	5.17	0.51	0	17.61	5.17	0.51
8	17.62	5.04	0.54	10	17.62	5.01	0.54
21	17.62	4.87	0.51	20	17.62	4.87	0.51
43	17.62	4.53	0.49	30	17.62	4.70	0.50
64	16.39	4.91	0.56	50	17.61	4.60	0.50
85	13.43	4.29	0.90	75	15.65	4.70	0.69
129	12.24	1.32	2.38	100	12.90	3.05	1.34
168	11.80	0.69	2.70	150	11.96	0.90	2.64
242	10.90	-	-	200	11.46	(0.62)	(2.75)
321	8.98	0.53	2.85	250	10.78	(0.58)	(2.80)
399	8.25	0.26	3.08	300	9.61	(0.55)	(2.83)
483	7.49	0.19	3.14	400	8.24	0.26	3.08
655	6.12	0.20	3.25	500	7.34	0.20	3.14
830	5.02	0.31	3.32	600	6.53	0.20	3.21
1026	4.18	0.47	3.35	700	5.82	0.20	3.27
				800	5.20	0.28	3.31
				1000	4.29	0.45	3.35

OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; February 22, 1951; 0527 GCT; 25°13'N, 114°21'W; sounding, 2100 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°.							133.50
0	17.52	5.41	0.55	0	17.52	5.41	0.55
10	17.55	5.45	0.51	10	17.55	5.45	0.51
25	17.51	5.46	0.50	20	17.54	5.45	0.50
49	17.48	5.46	0.48	30	17.50	5.46	0.50
74	14.64	5.55	0.62	50	17.48	5.45	0.48
98	11.48	3.45	-	75	14.45	5.55	(0.63)
151	12.05	0.92	-	100	11.47	3.20	(1.62)
198	11.43	0.35	2.71	150	12.05	0.92	(2.46)
294	10.06	0.23	2.80	200	11.38	0.34	2.72
392	8.55	0.17	2.96	250	10.63	0.25	2.78
486	7.43	0.22	3.16	300	9.98	0.23	2.81
585	6.49	0.23	3.07u	400	8.42	0.17	2.98
781	5.27	0.27	3.26	500	7.29	0.22	
975	4.42	0.39	3.27	600	6.36	0.25	
1178	3.84	0.63	3.25	700	5.71	0.25	
				800	5.17	0.27	3.26
				1000	4.32	0.42	3.27
CREST; February 21, 1951; 2353 GCT; 24°54.5'N, 115°01.5'W; sounding, 2100 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°.							133.60
0	18.00	5.14	0.50	0	18.00	5.14	0.50
10	17.82	4.80	0.48	10	17.82	4.80	0.48
25	17.57	5.29	0.47	20	17.63	5.29	0.48
49	17.66	5.22	0.48	30	17.57	5.29	0.47
74	14.45	4.82	0.94	50	17.65	5.19	0.48
98	12.67	3.48	-	75	14.44	4.76	(0.98)
152	11.94	0.90	2.77	100	12.59	3.32	
200	11.20	0.41	-	150	11.95	0.97	(2.75)
294	9.67	0.27	-	200	11.20	0.41	
394	8.47	0.21	3.25	250	10.39	0.30	
487	7.13	0.20	3.25	300	9.59	0.26	
589	6.38	0.24	2.99u	400	8.39	0.20	3.25
784	5.16	0.27	2.82u	500	7.00	0.20	
977	4.28	0.50	3.33	600	6.32	0.25	
1180	3.75	0.72	3.44	700	5.68	0.25	
				800	5.07	0.29	
				1000	4.20	0.54	3.34
CREST; February 22, 1951; 2335 GCT; 25°10'N, 113°04.5'W; sounding, 900 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 16°.							137.35
0	17.35	5.28	0.44	0	17.35	5.28	0.44
10	17.16	5.19	0.50	10	17.16	5.19	0.50
24	17.11	5.07	0.52	20	17.11	5.10	0.52
48	17.04	5.01	0.49	30	17.09	5.05	0.52
72	13.22	4.92	0.76	50	17.04	5.01	0.50
97	12.42	4.63	1.13	75	13.02	4.88	0.80
148	11.42	1.82	-	100	12.38	4.57	(1.18)
193	11.34	-	-	150	11.40	(1.77)	(1.81)
282	10.18	0.88	2.70	200	11.32	(1.28)	(2.24)
377	8.60	0.26	2.93	250	10.77	(1.01)	(2.55)
467	7.72	0.19	2.99	300	9.86	0.79	2.76
562	6.70	0.18	3.05	400	8.36	0.22	2.95
751	5.51	0.27	3.16	500	7.37	0.18	3.00
941	4.45	0.33	3.15	600	6.41	0.20	3.08
1143	3.96	0.53	3.16	700	5.78	0.25	3.14
				800	5.24	0.29	3.16
				1000	4.27	0.36	3.15

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OBSERVED				INTERPOLATED			
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
137.40	CREST; February 23, 1951; 0315 GCT; 25°00'N, 113°23.5'W; sounding, 1400 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 05°.						
0	17.41	5.44	0.52	0	17.41	5.44	0.52
10	17.42	5.44	0.54	10	17.42	5.44	0.54
25	17.34	5.46	0.51	20	17.38	5.46	0.52
50	16.93	5.51	0.52	30	17.27	5.47	0.51
75	13.67	5.57	0.58	50	16.93	5.51	0.52
99	11.55	4.42	1.19	75	13.67	5.57	0.58
153	11.38	1.64	2.31	100	11.54	4.38	1.22
202	10.88	0.76	2.55	150	11.39	1.77	2.28
296	9.72	-	-	200	10.91	0.77	2.54
396	8.64	0.27	2.90	250	10.25	0.52	2.65
491	7.42	0.23	3.04	300	9.67	0.39	2.74
589	6.60	0.21	3.11	400	8.59	0.27	2.91
788	5.22	0.27	-	500	7.34	0.23	3.05
982	4.34	0.44	3.29	600	6.53	0.21	(3.12)
1188	3.62	0.72	3.30	700	5.83	0.24	(3.18)
				800	5.15	0.27	(3.22)
				1000	4.26	0.45	3.29
137.50	CREST; February 23, 1951; 0848 GCT; 24°40'N, 114°01.5'W; sounding, 2100 fm; wind, 300°, force 3; weather, cloudy; sea, moderate; wire angle, 08°.						
0	18.84	5.24	0.55	0	18.84	5.24	0.55
13	18.84	5.29	0.53	10	18.84	5.29	0.53
22	18.74	5.30	0.52	20	18.78	5.30	0.52
38	18.71	5.33	0.55	30	18.72	5.32	0.54
62	14.75	5.34	0.63	50	18.67	5.35	0.59
87	12.59	5.28	1.34	75	13.36	5.31	0.87
111	11.82	2.96	2.41	100	12.13	3.90	2.34
212	10.54	0.76	2.59	150	11.23	1.70	2.50
309	9.30	0.39	2.81	200	10.67	0.87	2.57
410	8.13	0.24	2.98	250	10.09	0.53	2.65
506	7.06	0.25	3.06	300	9.43	0.40	2.79
606	6.42	0.27	3.13	400	8.23	0.25	2.96
802	4.99	0.28	3.27	500	7.13	0.25	3.06
1008	4.18	0.41	3.34	600	6.47	0.27	3.12
1206	3.63	0.74	3.32	700	5.74	0.27	3.20
				800	5.02	0.28	3.26
				1000	4.20	0.40	3.34
137.60	CREST; February 23, 1951; 1418 GCT; 24°20'N, 114°39.5'W; sounding, 2050 fm; wind, 350°, force 1; weather, cloudy; sea, very rough; wire angle, 05°.						
0	18.70	5.32	0.48	0	18.70	5.32	0.48
10	18.73	5.36	0.49	10	18.73	5.36	0.49
25	18.72	5.35	0.47	20	18.73	5.35	0.48
49	17.34	5.30	0.48	30	18.70	5.33	0.47
73	13.19	4.85	0.68	50	17.30	5.29	0.49
98	11.66	3.58	1.75	75	12.95	4.70	0.71
150	12.00	0.93	2.43	100	11.66	3.50	1.79
199	11.78	0.43	-	150	12.00	0.93	2.43
295	9.56	0.35	-	200	11.77	0.43	(2.82)
395	8.38	0.24	-	250	10.52	0.35	(2.96)
490	7.18	0.24	3.09	300	9.53	0.34	(3.02)
591	6.28	0.19	2.95	400	8.32	0.24	(2.99)
789	5.06	0.28	2.86u	500	7.09	0.24	3.08
987	4.28	0.40	3.22	600	6.22	0.20	
1192	3.70	0.68	3.28	700	5.57	0.23	
				800	5.00	0.28	
				1000	4.23	0.40	3.23

OBSERVED					INTERPOLATED					COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^5 cm^3/g$	ΔD dyn m	

BLACK DOUGLAS; March 23, 1951; 1615 GCT; 34°19'N, 120°48'W; sounding, 440 fm; wind, calm; weather, cloudy; sea, rough; wire angle, 13°. 80.55

0	13.58	-	5.71	0	13.58	(33.13)	5.71	(24.85)	(311)	(0.00)	
13	13.57	-	5.86	10	13.57	(33.11)	5.84	(24.84)	(313)	(0.03)	
27	11.67	33.09E	5.74	20	11.70	(33.09)	5.80	(25.18)	(280)	(0.06)	
51	11.66	33.33E	5.89	30	11.66	33.09	5.74	25.19	280	0.09	
74	10.21	33.57E	4.88	50	11.66	33.33	5.89	25.38	262	0.14	
96	10.04	33.77E	4.02	75	10.21	33.57	4.88	25.82	220	0.20	
147	8.84	34.09E	2.48	100	9.95	33.81	3.70	26.05	199	0.26	
193	8.56	34.10E	2.07	150	8.82	34.09	2.43	26.46	161	0.35	
239	8.09	34.14E	1.68	200	8.51	34.10	2.01	26.51	157	0.43	
285	7.72	34.23E	1.28	250	7.98	34.16	1.58	26.64	145	0.50	
335	7.12	34.22E	1.23	300	7.55	34.23	1.25	26.76	135	0.57	
383	6.91	34.21E	0.98	400	6.82	34.22	0.89	26.85	127	0.70	
478	6.27	34.36E	0.67	500	6.14	34.37	0.64	27.06	108	0.82	
579	-	34.40E	0.56	600	5.57	(34.40)	0.54	(27.15)	(100)	(0.92)	
677	5.19	34.39uE	0.42								

BLACK DOUGLAS; March 23, 1951; 1153 GCT; 34°09'N, 121°09'W; sounding, 1280 fm; wind, 320°, force 2; weather, partly cloudy; sea, very rough; wire angle, 14°. 80.60

0	14.46	33.25E	-	0	14.46	33.25		24.76	320	0.00	
12	14.45	33.10E	5.89	10	14.45	33.10		24.65	331	0.03	
26	14.46	33.21E	5.75	20	14.45	33.16	5.78	24.69	327	0.07	
50	14.44	33.31E	5.78	30	14.45	33.24	5.75	24.75	321	0.10	
74	10.76	33.04E	5.68	50	14.44	33.31	5.78	24.81	316	0.16	
96	9.48	33.26E	4.84	75	10.63	33.04	5.69	25.34	266	0.23	
144	8.80	33.78E	3.49	100	9.37	33.33	4.73	25.77	225	0.30	
189	8.00	34.07E	2.84	150	8.71	33.83	3.40	26.27	179	0.40	
276	7.22	34.16E	1.82	200	7.86	34.09	2.73	26.60	148	0.48	
368	6.55	34.16E	1.15	250	7.42	34.14	2.14	26.71	139	0.55	
458	5.90	34.27E	0.63	300	7.03	34.16	1.62	26.77	133	0.62	
550	5.38	34.42E	0.53	400	6.30	34.19	0.96	26.90	122	0.75	
736	4.74	34.38E	0.53	500	5.63	(34.32)	0.54	(27.08)	(100)	(0.86)	
925	4.16	34.45E	0.71	600	5.18		0.53				
1124	3.62	34.60E	0.82	700	4.84		0.53				
				800	4.52		0.57				
				1000	3.93		0.76				

BLACK DOUGLAS; March 23, 1951; 0203, 0411 GCT; 33°49'N, 121°51'W; sounding, 2200 fm; wind, 360°, force 5; weather, overcast; sea, very rough; wire angle, 14°, 20°. 80.70

0	14.48	33.28E	5.71	0	14.48	33.28	5.71	24.77	318	0.00	
11	14.50	33.13	-	10	14.50	33.13	5.71	24.66	330	0.03	
24	14.49	33.31E	5.72	20	14.49	33.30	5.71	24.79	317	0.06	
49	14.31	33.16E	5.74	30	14.45	33.30	5.72	24.80	317	0.10	
74	13.08	33.10E	5.85	50	14.31	33.15	5.75	24.71	326	0.16	
97	10.93	33.19E	5.06	75	12.83	33.10	5.85	24.98	301	0.24	
149	9.22	33.73E	3.84	100	10.85	33.22	5.01	25.44	257	0.31	
194	8.49	33.97E	3.15	150	9.17	33.74	3.81	26.13	193	0.42	
286	7.00	34.13E	2.62	200	8.40	33.99	3.11	26.44	163	0.51	
383	5.79	34.05E	1.64	250	7.61	34.11	2.78	26.65	144	0.59	
478	5.46	34.18E	0.76	300	6.77	34.13	2.50	26.79	132	0.66	
574	4.98	34.22E	0.63	400	5.72	34.06	1.47	26.87	124	0.78	
773	4.32	34.40E	0.39	500	5.37	34.19	0.71	27.01	112	0.90	
965	3.82	34.49E	0.54	600	4.87	34.24	0.60	27.11	103	1.01	
1169	3.39	34.69E	0.92	700	4.54	34.33	0.50	27.22	93	1.11	
				800	4.25		0.45				
469a)	5.48	34.18E	0.76	1000	3.74		0.67				
832	4.17	34.51E	0.61	1200	3.35		0.96				
923p	3.93	34.58E	0.56	1500	2.79		1.25				
1020	3.68	34.65E	0.76	2000	2.13		1.82				
1189p	3.37	34.52E	0.96								
1304	3.16	34.54E	1.03								
1545	2.70	34.67E	1.29								
1790	2.33	34.61E	1.55								
2038	2.10	34.64E	1.85								

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Black Douglas samples on Cruise 5103, it is estimated that the mean effect of evaporation was 0.038‰, with a standard deviation of 0.064‰.

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5}cm^3/g	ΔD dyn m
80.80	BLACK DOUGLAS; March 22, 1951; 2129 GCT; 33°39'N, 122°24'W; sounding, 2220 fm; wind, 330°, force 5; weather, overcast; sea, high; wire angle, 14°.											
0	14.49	33.25E	5.70		0	14.49	33.25	5.70		24.75	321	0.00
10	14.47	33.13	5.70		10	14.47	33.13	5.70		24.67	329	0.03
24	14.41	33.17E	5.72		20	14.41	33.16	5.72		24.70	326	0.07
48	14.47	33.26E	5.68		30	14.43	33.21	5.71		24.74	323	0.10
72	14.46	33.27E	5.68		50	14.47	33.26	5.68		24.76	321	0.16
96	11.68	33.08E	5.46		75	14.42	33.26	5.66		24.78	320	0.24
146	9.28	33.75E	3.93		100	11.30	33.08	5.38		25.25	275	0.32
192	8.46	33.88E	3.16		150	9.18	33.77	3.83		26.15	191	0.43
284	7.09	34.05E	2.39		200	8.33	33.90	3.07		26.38	167	0.52
381	6.01	34.16E	1.52		250	7.57	34.00	2.62		26.57	151	0.60
477	5.51	34.27E	0.85		300	6.89	34.07	2.26		26.72	138	0.67
572	4.89	34.33E	0.61		400	5.88	34.18	1.37		26.94	117	0.80
765	4.30	34.50E	0.44		500	5.39	34.28	0.75		27.08	105	0.91
956	3.87	34.60E	0.83		600	4.78	34.35	0.60		27.20	94	1.01
1158	3.45	34.65E	0.96		700	4.47	34.45	0.50		27.32	83	1.10
					800	4.22	34.52	0.47		27.40	76	1.18
					1000	3.78	34.61	0.88		27.52	66	1.32
80.90	BLACK DOUGLAS; March 22, 1951; 1504 GCT; 33°15'N, 123°11'W; sounding, 2340 fm; wind, 360°, force 5; weather, cloudy; sea, very rough; wire angle, 20°.											
0	14.06	33.12E	5.79		0	14.06	33.12	5.79		24.74	321	0.00
10	14.05	32.97	5.80		10	14.05	32.97	5.80		24.63	332	0.03
23	14.06	33.12E	5.77		20	14.05	33.12	5.77		24.75	322	0.07
52	13.96	33.10E	5.79		30	14.05	33.12	5.77		24.75	322	0.10
76	12.54	33.02E	5.85		50	13.97	33.10	5.79		24.75	322	0.16
104	10.76	33.07E	5.57		75	12.54	33.02	5.85		24.97	301	0.24
153	9.09	33.57E	4.20		100	11.10	33.06	5.65		25.27	274	0.31
202	8.36	33.96E	3.14		150	9.17	33.54	4.25		25.97	208	0.44
299	6.93	34.04E	2.23		200	8.37	33.96	3.18		26.42	165	0.53
404	5.76	34.20E	1.15		250	7.67	34.01	2.62		26.57	152	0.61
502	5.30	34.28E	0.70		300	6.90	34.04	2.23		26.70	140	0.69
605	4.82	34.38E	0.46		400	5.79	34.19	1.18		26.96	116	0.81
804	4.36	34.43E	0.49		500	5.32	34.28	0.71		27.09	104	0.92
1012	3.68	34.45E	0.71		600	4.83	34.38	0.46		27.23	92	1.02
1226	3.23	34.62E	0.97		700	4.57	34.41	0.47		27.28	88	1.11
					800	4.36	34.43	0.49		27.32	85	1.20
					1000	3.73	34.45	0.70		27.40	78	1.36
80.100	BLACK DOUGLAS; March 22, 1951; 0708 GCT; 32°49'N, 123°54'W; sounding, 2450 fm; wind, 360°, force 4; weather, cloudy; sea, very rough; wire angle, 02°.											
0	13.44	32.95E	5.86		0	13.44	32.95	5.86		24.74	322	0.00
10	13.46	32.94	5.88		10	13.46	32.94	5.88		24.73	323	0.03
25	13.15	33.01E	5.86		20	13.32	32.98	5.87		24.79	318	0.06
50	12.60	33.08E	5.87		30	13.02	33.03	5.86		24.89	309	0.10
74	10.56	32.94E	5.82		50	12.60	33.08	5.87		25.00	298	0.16
98	9.32	33.21E	4.98		75	10.44	32.94	5.81		25.29	271	0.28
151	8.70	33.73E	3.25		100	9.27	33.23	4.86		25.71	231	0.29
198	8.13	33.91E	2.92		150	8.70	33.73	3.28		26.19	186	0.39
293	6.90	34.16E	2.48		200	8.11	(33.92)	2.91		(26.43)	(164)	(0.48)
392	5.94	34.11E	1.00		250	7.42		2.73				
487	5.40	34.26E	0.72		300	6.82		2.41				
588	4.88	34.27E	0.51		400	5.89		0.97				
789	4.28	34.52E	0.39		500	5.33		0.69				
980	3.78	34.54E	0.65		600	4.84		0.49				
1185	3.24	34.63E	0.89		700	4.51		0.40				
					800	4.25		0.40				
					1000	3.73		0.67				

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

BLACK DOUGLAS; March 22, 1951; 0014 GCT; 32°29'N, 124°34.5'W; sounding, 2400 fm; wind, 360°, force 2; weather, cloudy; sea, moderate; wire angle, 03°. 80.110

0	13.93	32.96E	5.87	0	13.93	32.96	5.87	24.65	331	0.00
10	13.84	32.99	5.82	10	13.84	32.99	5.82	24.69	327	0.03
25	13.74	33.01E	5.78	20	13.77	33.00	5.79	24.71	325	0.07
49	13.43	32.94E	5.77	30	13.68	33.01	4.78	24.74	323	0.10
73	11.94	33.05E	5.81	50	13.38	32.94	5.78	24.74	323	0.16
97	9.70	33.12E	5.89	75	11.75	33.06	5.83	25.15	284	0.24
148	8.84	33.79E	5.07	100	9.62	33.13	5.91	25.58	244	0.30
195	8.18	33.96E	3.55	150	8.81	33.81	5.02	26.24	182	0.41
287	6.92	34.09E	2.76	200	8.12	33.97	3.44	26.47	161	0.50
383	6.34	34.20E	1.72	250	7.41	34.05	2.98	26.64	145	0.57
476	5.58	34.18E	0.88	300	6.81	34.11	2.65	26.76	134	0.64
573	4.93	34.31E	0.53	400	6.22	34.20	1.54	26.92	120	0.77
764	4.29	34.44E	0.50	500	5.39	34.20	0.77	27.02	111	0.88
954	3.74	34.52E	0.47	600	4.80	34.33	0.51	27.19	96	0.99
1153	3.29	34.58E	0.81	700	4.46	34.40	0.50	27.28	87	1.08
				800	4.19	34.46	0.49	27.36	80	1.16
				1000	3.62	34.53	0.52	27.47	70	1.31

BLACK DOUGLAS; March 21, 1951; 1755 GCT; 32°09'N, 125°15.5'W; sounding, 2440 fm; wind, 360°, force 2; weather, cloudy; sea, moderate; wire angle, 07°. 80.120

0	14.06	33.01E	5.87	0	14.06	33.01	5.87	24.66	329	0.00
10	14.05	32.99	5.82	10	14.05	32.99	5.82	24.65	331	0.03
24	14.06	33.04E	5.78	20	14.05	33.01	5.78	24.66	330	0.07
50	14.02	33.12uE	5.77	30	14.05	33.04	5.77	24.68	328	0.10
74	13.88	32.99E	5.81	50	14.02	33.03	5.77	24.68	328	0.16
98	12.68	32.84E	5.89	75	13.87	32.98	5.82	24.68	328	0.25
149	9.08	33.17E	5.07	100	12.50	32.84	5.89	24.84	314	0.33
197	8.46	33.79E	3.55	150	9.06	33.18	5.03	25.71	232	0.46
291	7.23	34.02E	2.76	200	8.43	33.80	3.51	26.29	178	0.56
390	6.04	34.04E	1.72	250	7.81	33.96	3.03	26.51	158	0.65
483	5.42	34.15E	0.88	300	7.10	34.03	2.70	26.66	143	0.72
583	5.09	34.27E	0.53	400	5.96	34.05	1.59	26.83	128	0.86
777	4.34	34.34E	0.50	500	5.35	34.17	0.80	27.00	113	0.98
968	3.80	34.45E	0.47	600	5.03	34.28	0.53	27.12	102	1.09
1170	3.28	34.59E	0.81	700	4.59	34.32	0.50	27.21	94	1.19
				800	4.28	34.35	0.50	27.26	90	1.28
				1000	3.69	34.47	0.49	27.42	76	1.44

BLACK DOUGLAS; March 21, 1951; 1000 GCT; 31°49'N, 125°56'W; sounding, 2240 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 08°. 80.130

0	14.12	33.02E	5.76	0	14.12	33.02	5.76	24.66	330	0.00
10	13.93	33.01	5.76	10	13.93	33.01	5.76	24.69	327	0.03
25	13.82	33.11E	5.64	20	13.85	33.10	5.65	24.77	319	0.07
50	13.44	32.99E	5.89	30	13.75	33.10	5.70	24.79	318	0.10
74	12.42	32.98E	5.63	50	13.44	32.99	5.89	24.77	320	0.16
99	10.86	33.00E	5.57	75	12.38	32.98	5.63	24.97	302	0.24
152	9.44	33.42E	4.68	100	10.83	33.00	5.56	25.27	273	0.31
200	8.58	33.81E	3.85	150	9.45	33.40	4.75	25.82	222	0.43
291	7.44	34.12E	2.32	200	8.58	33.81	3.85	26.27	179	0.53
391	6.44	34.11E	1.45	250	7.91	34.00	2.98	26.52	156	0.62
484	5.85	34.18E	0.79	300	7.33	34.12	2.24	26.70	140	0.69
584	5.37	34.38E	0.46	400	6.38	34.11	1.37	26.82	129	0.83
778	4.39	34.43E	0.38	500	5.78	(34.21)	0.72	(26.99)	(114)	(0.95)
971	3.83	34.54E	0.53	600	5.28		0.45			
1173	3.39	34.47E	1.01	700	4.72		0.40			
				800	4.29		0.40			
				1000	3.76		0.62			

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

85.40 BLACK DOUGLAS; March 17, 1951; 2209 GCT; 33°57'N, 119°10.5'W; sounding, 410 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 05°.

0	13.65	33.35E	6.02		0	13.65	33.35	6.02		25.01	296	0.00
10	13.16	33.30	6.07		10	13.16	33.30	6.07		25.07	291	0.03
25	12.54	33.35E	5.95		20	12.75	33.32	6.02		25.16	282	0.06
50	10.95	33.46E	4.60		30	12.27	33.38	5.80		25.30	269	0.09
74	9.68	33.57E	3.85		50	10.95	33.46	4.60		25.60	240	0.14
99	9.28	33.78E	3.27		75	9.66	33.58	3.80		25.92	211	0.19
152	8.78	33.98E	2.52		100	9.27	33.78	3.25		26.14	190	0.24
200	8.74	34.04E	2.24		150	8.79	33.98	2.54		26.38	169	0.33
246	7.88	34.14E	1.87		200	8.74	34.04	2.24		26.43	165	0.42
293	7.84	34.23E	-		250	7.86	34.15	1.84		26.65	144	0.49
344	7.36	34.22E	1.25		300	7.81	34.23	1.52		26.72	139	0.56
392	6.96	34.25E	0.84		400	6.91	34.26	0.79		26.87	125	0.70
487	6.38	34.29E	0.54		500	6.31	34.29	0.52		26.97	116	0.82
587	5.92	34.33E	0.33		600	5.85	34.34	0.31		27.07	108	0.93
686	5.37	34.38E	0.26									

85.50 BLACK DOUGLAS; March 17, 1951; 1702 GCT; 33°37'N, 119°52'W; sounding, 120 fm; wind, 090°, force 2; weather, partly cloudy; sea, rough; wire angle, 01°.

0	11.68	33.46E	5.85	-	0	11.68	33.46	5.85		25.47	252	0.00
10	11.68	33.46	5.76	-	10	11.68	33.46	5.76		25.47	252	0.03
25	11.70	33.46E	5.75	-	20	11.68	33.46	5.75		25.47	252	0.05
48	11.13	33.53E	5.22	1.11	30	11.69	33.46	5.75		25.47	253	0.08
71	9.69	33.79E	3.32	-	50	11.13	33.54	5.10		25.63	238	0.12
94	9.36	33.86E	2.95	-	75	9.57	33.80	3.22		26.11	193	0.18
142	9.15	34.02E	2.40	-	100	9.34	33.88	2.88		26.21	184	0.23
188	8.74	34.14E	1.93	2.22	150	9.09	34.04	2.30		26.38	169	0.31

85.70 BLACK DOUGLAS; March 16, 1951; 2227 GCT; 32°57'N, 121°14.5'W; sounding, 2000 fm; wind, 330°, force 6; weather, cloudy; sea, high; wire angle, 07°.

0	12.36	33.24E	6.05	-	0	12.36	33.24	6.05		25.17	280	0.00
10	12.40	33.17	6.03	0.70	10	12.40	33.17	6.03	0.70	25.11	286	0.03
25	12.32	33.26E	6.03	0.76	20	12.36	33.25	6.03	0.74	25.18	280	0.06
49	11.14	33.17E	5.46	-	30	12.26	33.25	6.00	0.79	25.20	278	0.08
73	10.11	33.46E	4.60	1.39	50	11.10	33.17	5.40	1.03	25.35	264	0.14
98	9.63	33.64E	3.81	-	75	10.03	33.49	4.55	1.40	25.79	223	0.20
149	8.57	33.95E	2.64	2.04	100	9.59	33.66	3.73	1.70	26.00	204	0.25
197	8.19	34.02E	2.50	-	150	8.56	33.95	2.62	(2.04)	26.39	168	0.35
290	7.33	34.13E	1.51	-	200	8.17	34.03	2.50		26.51	157	0.43
388	6.49	34.22E	0.98	2.87	250	7.75	34.08	2.11		26.61	148	0.50
482	5.90	34.27E	0.66	-	300	7.23	34.14	1.40		26.73	137	0.58
580	5.38	34.36E	0.46	-	400	6.41	34.23	0.93		26.91	121	0.70
773	4.58	34.42E	0.44	3.16	500	5.81	34.28	0.61		27.03	110	0.82
967	3.93	34.49E	0.87	-	600	5.29	34.37	0.45		27.17	98	0.92
1169	3.43	34.52E	1.19	3.26	700	4.86	34.40	0.45		27.24	92	1.02
					800	4.48	34.43	0.47		27.31	86	1.11
					1000	3.84	34.50	0.93		27.43	75	1.27

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
BLACK DOUGLAS; March 16, 1951; 1356 GCT; 32°37'N, 121°55.5'W; sounding, 2260 fm; wind, 320°, force 6; weather, overcast; sea, very rough; wire angle, 35°.												85.80
0	14.74	33.21E	-	0.48	0	14.74	33.21		0.48	24.67	329	0.00
9	14.75	33.22E	6.54	-	10	14.75	33.22	6.54	0.51	24.68	328	0.03
21	14.73	33.22E	5.71	0.53	20	14.74	33.22	5.71	0.53	24.68	328	0.07
46	14.74	33.31uE	5.69	0.55	30	14.74	33.22	5.70	0.54	24.68	328	0.10
66	14.72	33.21E	5.76	0.55	50	14.74	33.21	5.69	0.55	24.67	329	0.16
83p	14.64	33.21E	5.80	0.59	75	14.72	33.21	5.79	0.56	24.69	327	0.25
88	14.26	33.15E	-	0.65	100	13.15	33.17	5.62	0.82	24.97	302	0.32
166p	9.10	33.71E	3.72	1.79	150	10.12	33.60	4.10	1.56	25.86	218	0.45
253p	7.62	34.02E	2.76	2.18	200	8.40	33.86	3.25	1.96	26.34	173	0.55
340p	6.56	34.14E	2.20	-	250	7.66	34.01	2.79	2.17	26.57	152	0.63
425p	5.92	34.27E	1.09	2.90	300	7.03	34.10	2.43	2.40	26.73	137	0.71
603p	5.36	34.34E	0.41	-	400	6.08	34.24	1.35	2.84	26.97	116	0.83
791p	4.59	34.52E	0.42	-	500	5.65	34.31	0.67		27.07	106	0.94
984p	4.02	34.45E	0.60	-	600	5.36	34.34	0.41		27.13	102	1.05
					700	4.99		0.42				
					800	4.55		0.42				
BLACK DOUGLAS; March 16, 1951; 0607 GCT; 32°17'N, 122°37'W; sounding, 2300 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 22°.												85.90
0	14.43	33.17E	5.71	0.61	0	14.43	33.17	5.71	0.61	24.70	325	0.00
9	-	33.12E	5.72	0.63	10	14.41	33.12	5.72	0.63	24.67	329	0.03
23	14.40	33.12E	5.89	-	20	14.40	33.12	5.88	0.63	24.67	329	0.07
47	14.43	33.26E	5.85	0.54	30	14.41	33.17	5.88	0.61	24.71	326	0.10
70	14.39	33.21E	5.78	-	50	14.43	33.26	5.84	(0.54)	24.77	320	0.16
92	13.84	33.17E	5.72	-	75	14.35	33.20	5.75	(0.63)	24.74	323	0.24
139	9.94	33.28E	4.94	-	100	13.57	33.17	5.66	(0.75)	24.88	311	0.32
180	8.94	33.69E	3.79	1.82	150	9.55	33.37	4.65	(1.56)	25.78	225	0.46
263	7.65	34.11E	2.86	2.17	200	8.61		3.50	1.94			
353	6.65	34.04E	2.15	-	250	7.83		2.98	2.13			
437	6.04	34.11E	1.22	-	300	7.22		2.57				
526	5.66	34.38E	0.68	-	400	6.29		1.67				
704	4.96	34.47E	0.40	3.19	500	5.76		0.80				
886	4.12	34.40E	0.55	-	600	5.37		0.50				
1079	3.67	34.47E	0.83	-	700	4.98		0.40				
					800	4.54		0.45				
					1000	3.80		0.73				
BLACK DOUGLAS; March 18, 1951; 0709 GCT; 33°24.5'N, 117°55'W; sounding, 340 fm; wind, 320°, force 1; weather, clear; sea, moderate; wire angle, 04°.												90.30
0	13.77	33.35E	6.17		0	13.77	33.35	6.17		24.98	299	0.00
10	13.74	33.28	6.24		10	13.74	33.28	6.24		24.93	304	0.03
25	12.69	33.33E	6.05		20	13.73	33.31	6.15		24.96	302	0.06
49	10.68	33.44E	4.76		30	12.07	33.36	5.85		25.32	267	0.09
74	9.90	33.64E	4.70		50	10.67	33.45	4.75		25.65	236	0.14
98	9.52	33.69E	3.34		75	9.90	33.64	4.69		25.93	210	0.19
149	9.28	34.07E	2.29		100	9.50	33.70	3.30		26.04	200	0.25
195	8.83	34.14E	1.77		150	9.28	34.07	2.29		26.37	170	0.34
242	8.56	34.23E	1.37		200	8.78	34.15	1.74		26.51	157	0.42
288	7.72	34.23E	1.20		250	8.47	34.23	1.32		26.62	148	0.50
339	7.44	34.27E	0.97		300	7.64	34.24	1.16		26.75	136	0.57
385	7.08	34.23E	0.82		400	6.91	34.23	0.79		26.85	128	0.70
432	6.62	34.23E	0.72		500	6.34	34.28	0.65		26.96	117	0.82
479	6.42	34.27E	0.68		600	(5.95)	(34.34)			(27.06)	(109)	(0.93)
580	6.02	34.33E	0.49									

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
90.37	BLACK DOUGLAS; March 18, 1951; 1204 GCT; 33°11'N, 118°23.5'W; sounding, 650 fm; wind, 160°, force 1; weather, partly cloudy; sea, moderate; wire angle, 13°.											
0	13.40	33.26E	5.96		0	13.40	33.26	5.96		24.99	298	0.00
10	13.30	33.24	6.20		10	13.30	33.24	6.20		24.99	298	0.03
24	12.66	33.40E	6.11		20	13.05	33.40	6.16		25.17	282	0.06
49	10.37	33.40E	4.68		30	12.10	33.40	5.85		25.35	265	0.09
73	9.76	33.60E	3.79		50	10.35	33.40	4.68		25.67	235	0.14
98	9.20	33.77E	3.31		75	9.72	33.62	3.76		25.94	209	0.19
151	8.72	34.09E	2.53		100	9.16	33.78	3.27		26.16	188	0.24
200	8.65	34.14E	1.89		150	8.72	34.09	2.55		26.47	160	0.33
293	7.36	34.18E	1.21		200	8.65	34.14	1.89		26.52	156	0.41
392	6.71	34.22E	0.61		250	8.19	34.16	1.49		26.61	148	0.48
485	6.15	34.27E	0.81u		300	7.28	34.18	1.17		26.76	134	0.55
585	5.70	34.49E	0.48		400	6.66	34.22	0.60		26.87	125	0.68
778	4.96	34.45E	0.36		500	6.09	(34.28)	0.51		(27.00)	(114)	(0.80)
969	4.28	34.43E	0.50		600	5.64		0.47				
1169	4.12	34.45E	0.73		700	5.23		0.41				
					800	4.87		0.36				
					1000	4.23		0.55				
90.45	BLACK DOUGLAS; March 18, 1951; 1743 GCT; 32°54.5'N, 118°56'W; sounding, 950 fm; wind, 080°, force 1; weather, clear; sea, moderate; wire angle, 00°.											
0	13.64	33.38E	5.97		0	13.64	33.38	5.97		25.03	294	0.00
10	13.32	33.35	5.98		10	13.32	33.35	5.98		25.07	290	0.03
26	12.62	33.37E	5.73		20	13.03	33.36	5.97		25.14	284	0.06
51	9.93	33.58E	3.93		30	11.80	33.40	5.45		25.41	259	0.09
76	9.28	33.75E	3.27		50	9.98	33.58	4.00		25.87	215	0.13
100	9.04	33.86E	2.85		75	9.29	33.75	3.29		26.12	192	0.18
153	8.36	34.09E	2.20		100	9.04	33.86	2.85		26.24	181	0.23
201	7.98	34.20E	1.78		150	8.40	34.08	2.25		26.51	156	0.31
298	-	34.20E	1.16		200	7.98	34.20	1.80		26.67	141	0.39
398	6.66	34.29E	0.71		250	(7.62)	34.20	1.45		(26.72)	(137)	(0.46)
494	6.09	34.31E	0.66		300	(7.28)	34.20	1.15		(26.77)	(133)	(0.53)
595	5.62	34.34E	0.40		400	6.64	34.29	0.70		26.93	119	(0.65)
792	4.84	34.51E	0.42		500	6.05	34.31	0.64		27.02	111	(0.77)
985	4.10	34.51E	0.58		600	5.59	(34.34)	0.40		(27.11)	(104)	(0.87)
1187	3.87	34.51E	0.75		700	5.17		0.41				
					800	4.81		0.44				
					1000	4.05		0.59				
90.53	BLACK DOUGLAS; March 18, 1951; 2301 GCT; 32°38.5'N, 119°29'W; sounding, 730 fm; wind, calm; weather, clear; sea, moderate; wire angle, 02°.											
0	12.75	33.39E	5.97		0	12.75	33.39	5.97		25.22	276	0.00
10	12.17	33.29	6.01		10	12.17	33.29	6.01		25.25	274	0.03
25	11.98	33.33E	5.94		20	12.02	33.31	5.99		25.29	270	0.05
50	11.27	33.42E	5.20		30	11.93	33.35	5.85		25.34	265	0.08
75	9.99	33.62E	3.81		50	11.27	33.42	5.20		25.52	249	0.13
99	9.60	33.91E	3.33		75	9.99	33.62	3.81		25.90	213	0.19
152	8.82	33.91E	2.56		100	9.60	33.91	3.32		26.19	186	0.24
200	8.46	34.07E	2.06		150	8.85	33.91	2.59		26.31	175	0.33
296	7.34	34.22E	1.25		200	8.46	34.07	2.06		26.50	158	0.41
397	6.76	34.23E	0.77		250	7.92	34.18	1.64		26.66	143	0.49
493	6.32	34.33E	0.59		300	7.31	34.22	1.23		26.78	132	0.56
595	5.80	34.33E	0.36		400	6.75	34.23	0.77		26.87	125	0.69
791	4.74	34.42E	0.43		500	6.28	34.33	0.58		27.01	113	0.81
984	4.14	34.47E	0.56		600	5.77	34.33	0.36		27.07	108	0.92
1186	3.88	34.51E	0.75		700	5.25	34.37	0.40		27.17	99	1.02
					800	4.70	34.42	0.44		27.26	90	1.11
					1000	4.12	34.47	0.58		27.37	81	1.28

OBSERVED					INTERPOLATED					COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m	
BLACK DOUGLAS; March 19, 1951; 0330 GCT; 32°25'N, 119°57.5'W; sounding, 560 fm; wind, calm; weather, clear; sea, very rough; wire angle, 05°.													90.60
0	15.44	33.26E	5.65		0	15.44	33.26	5.65		24.56	339	0.00	
10	15.34	33.24	5.72		10	15.34	33.24	5.72		24.56	339	0.03	
26	14.51	33.24E	5.88		20	14.90	33.24	5.82		24.66	330	0.07	
50	13.85	33.15E	5.91		30	14.40	33.24	5.91		24.77	320	0.10	
75	12.12	33.13E	5.73		50	13.85	33.15	5.91		24.81	316	0.16	
101	10.36	33.17E	5.14		75	12.12	33.13	5.73		25.14	286	0.24	
153	8.62	33.78E	3.33		100	10.42	33.17	5.16		25.47	254	0.31	
201	8.18	33.93E	3.50u		150	8.68	33.77	3.40		26.23	183	0.42	
294	7.36	34.11E	1.81		200	8.18	33.93	2.67		26.43	164	0.50	
391	6.26	34.14E	1.25		250	7.76	34.05	2.16		26.59	150	0.58	
487	5.43	34.18E	0.85		300	7.29	34.11	1.76		26.70	140	0.65	
					400	6.17	34.14	1.22		26.87	124	0.79	
					500	(5.38)	(34.19)			(27.01)	(112)	(0.90)	
BLACK DOUGLAS; March 19, 1951; 0941, 1126 GCT; 32°04.5'N, 120°39'W; sounding, 2100 fm; wind, 330°, force 2; weather, clear; sea, rough; wire angle, 01°, 01°.													90.70
0	14.27	33.17E	5.83		0	14.27	33.17	5.83		24.74	322	0.00	
10	14.06	33.17	5.90		10	14.06	33.17	5.90		24.79	318	0.03	
25	13.99	33.20E	5.95		20	14.00	33.19	5.95		24.81	316	0.06	
50	12.65	33.26E	5.94		30	13.21	33.22	5.95		24.99	299	0.09	
74	11.26	33.22E	5.09		50	12.65	33.26	5.94		25.13	285	0.15	
98	9.60	33.38E	4.47		75	11.20	33.22	5.09		25.38	263	0.22	
152	8.80	33.86E	3.02		100	9.55	33.42	4.30		25.81	221	0.28	
200	8.25	33.96E	2.68		150	8.83	33.86	3.05		26.27	179	0.38	
295	7.14	34.14E	1.50		200	8.25	33.96	2.68		26.44	163	0.47	
396	6.34	34.22E	0.92		250	7.67	34.06	2.11		26.61	148	0.55	
491	5.73	-	0.57		300	7.10	34.14	1.46		26.75	135	0.62	
591	5.36	-	0.41		400	6.31	(34.22)	0.92		(26.92)	(120)	(0.74)	
790	4.58	-	0.50		500	5.69		0.59					
984	3.94	-	0.63		600	5.34		0.44					
1187	3.41	-	0.94		700	4.96		0.45					
					800	4.53		0.51					
492a)	5.70	-	0.60		1000	3.87		0.67					
883	4.18	-	0.58		1200	3.37		0.99					
1376	2.99	-	1.20		1500	2.77		1.28					
1618	2.57	-	1.35		2000	2.07		1.98					
1871	2.20	-	1.76		2500	1.79		2.30					
2123	1.97	-	2.11										
2379	1.84	-	2.13										
2644	1.72	-	2.52										
BLACK DOUGLAS; March 19, 1951; 1816 GCT; 31°45'N, 121°19'W; sounding, 2100 fm; wind, 330°, force 1; weather, partly cloudy; sea, moderate; wire angle, 20°.													90.80
0	13.79	33.10E	5.76		0	13.79	33.10	5.76		24.78	318	0.00	
9	13.63	33.00	5.84		10	13.63	33.00	5.84		24.74	322	0.03	
23	13.36	33.06E	5.89		20	13.40	33.05	5.89		24.82	314	0.06	
48	12.89	33.12E	5.95		30	13.20	33.09	5.91		24.90	308	0.09	
71	11.58	33.10E	5.65		50	12.84	33.12	5.94		24.99	299	0.16	
94	10.44	33.10E	5.29		75	11.28	33.10	5.60		25.27	273	0.23	
143	9.06	33.62E	3.62		100	10.21	33.11	5.19		25.46	255	0.29	
187	8.44	33.86E	3.67u		150	8.93	33.66	3.49		26.10	195	0.41	
271	7.22	34.13E	2.34		200	8.28	33.92	2.94		26.41	167	0.50	
359	6.20	34.07E	1.53		250	7.55	34.11	2.50		26.66	143	0.57	
445	5.58	34.16E	0.98		300	6.84	34.11	2.08		26.76	134	0.64	
534	5.66	34.40E	0.54		400	5.78	34.10	1.25		26.89	122	0.77	
713	4.64	34.37E	0.53		500	5.62	34.33	0.65		27.09	104	0.88	
894	4.05	34.45E	0.62		600	5.40	34.40	0.54		27.17	98	0.99	
1089	3.62	34.51E	0.75		700	4.73	34.37	0.54		27.23	92	1.08	
					800	4.31	34.40	0.58		27.30	86	1.17	
					1000	3.79	34.49	0.70		27.43	75	1.33	

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

90.90 BLACK DOUGLAS; March 19, 1951; 2352 GCT; 31°25'N, 121°59'W; sounding, 2180 fm; wind, 330°, force 2; weather, cloudy; sea, rough; wire angle, 10°.

0	15.34	33.19E	5.71	0	15.35	33.19	5.71	24.52	342	0.00
24	14.78	33.21E	5.76	10	15.1	(33.20)		(24.59)	(336)	(0.03)
49	14.62	33.13E	5.77	20	14.8	(33.21)		(24.65)	(331)	(0.07)
73	14.63	33.15E	5.76	30	14.71	33.20	5.76	24.67	329	0.10
98	12.87	33.03E	5.76	50	14.62	33.13	5.77	24.63	333	0.17
150	9.78	33.42E	4.38	75	14.61	33.15	5.76	24.65	332	0.25
198	8.44	33.90E	3.46	100	12.64	33.03	5.75	24.96	303	0.33
293	7.10	34.04E	2.23	150	9.78	33.42	4.38	25.78	226	0.46
391	6.19	34.11E	1.49	200	8.41	33.91	3.44	26.38	169	0.56
487	5.41	34.20E	0.88	250	7.62	33.99	2.77	26.56	153	0.64
588	5.07	34.29E	0.57	300	7.03	34.04	2.17	26.68	142	0.71
782	4.44	34.48E	0.47	400	6.11	34.12	1.44	26.87	125	0.85
974	3.89	34.47E	0.76	500	5.33	34.21	0.83	27.03	110	0.97
1176	3.47	34.61E	0.93	600	5.04	(34.30)	0.56	(27.14)	(101)	(1.07)
				700	4.75		0.50			
				800	4.38		0.50			
				1000	3.84		0.80			

90.100 BLACK DOUGLAS; March 20, 1951; 0543 GCT; 31°04.5'N, 122°40'W; sounding, 2240 fm; wind, 350°, force 2; weather, cloudy; sea, rough; wire angle, 10°.

0	15.73	33.28E	5.55	0	15.73	33.28	5.55	24.51	344	0.00
10	15.73	33.26	5.21	10	15.73	33.26	5.21	24.49	346	0.03
25	15.64	33.37E	5.59	20	15.68	33.35	5.48	24.57	338	0.07
50	15.90	33.40E	5.45	30	15.65	33.37	5.57	24.59	336	0.10
74	16.06	33.48E	5.46	50	15.90	33.40	5.45	24.56	340	0.17
98	16.25	33.53E	5.46	75	16.06	33.49	5.46	24.59	338	0.25
150	10.12	33.17E	5.17	100	16.25	33.53	5.45	24.58	340	0.34
198	9.02	33.69E	3.85	150	10.12	33.17	5.17	25.52	250	0.49
291	7.67	34.04E	2.50	200	8.97	33.71	3.80	26.13	193	0.60
391	6.42	34.09E	1.63	250	8.22	33.97	2.97	26.45	163	0.69
485	5.65	34.20E	0.90	300	7.54	34.04	2.43	26.61	149	0.76
585	4.96	34.23E	0.51	400	6.33	34.10	1.57	26.82	129	0.90
780	4.42	34.42E	0.44	500	5.53	34.21	0.80	27.01	112	1.02
973	3.86	34.56E	0.63	600	4.89	(34.24)	0.50	(27.11)	(103)	(1.13)
1175	3.41	34.55E	0.88	700	4.59		0.46			
				800	4.38		0.47			
				1000	3.78		0.66			

90.110 BLACK DOUGLAS; March 20, 1951; 1149 GCT; 30°44.5'N, 123°20'W; sounding, 2200 fm; wind, 360°, force 2; weather, cloudy; sea, moderate; wire angle, 06°.

0	16.65	33.72E	5.21	0	16.65	33.72	5.21	24.63	332	0.00
10	16.62	33.66	5.35	10	16.62	33.66	5.35	24.59	336	0.03
26	16.64	33.66E	4.97	20	16.64	33.66	5.00	24.59	336	0.07
50	16.59	33.68E	5.48	30	16.64	33.66	5.00	24.59	337	0.10
75	16.59	33.68E	5.38	50	16.59	33.68	5.48	24.62	335	0.17
99	15.82	33.53E	5.44	75	16.59	33.68	5.38	24.62	335	0.25
152	11.30	33.55E	4.50	100	15.55	33.53	5.44	24.74	324	0.33
199	9.42	33.86E	3.90	150	11.48	33.55	4.55	25.58	245	0.48
295	7.61	34.04E	2.59	200	9.40	33.86	3.88	26.18	188	0.58
396	6.08	34.02E	2.15	250	8.35	34.00	3.23	26.46	163	0.67
492	5.46	34.18E	1.05	300	7.54	34.04	2.56	26.61	149	0.75
592	4.84	34.31E	0.56	400	6.00	34.02	2.12	26.80	131	0.89
790	4.47	34.56E	0.43	500	5.42	34.19	1.00	27.00	112	1.01
983	3.83	34.49E	0.67	600	4.81	(34.31)	0.54	(27.18)	(96)	(1.12)
1184	3.32	34.58E	0.96	700	4.59		0.46			
				800	4.44		0.44			
				1000	3.77		0.71			

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

BLACK DOUGLAS; March 20, 1951; 1644 GCT; 30°24.5'N, 124°00.5'W; sounding, 2250 fm; wind, 350°, force 2; weather, overcast; sea, moderate; wire angle, 05°. 90.120

0	15.89	33.37E	5.52		0	15.89	33.37	5.52		24.54	341	0.00
12	15.88	33.33	5.55		10	15.89	33.33	5.55		24.51	344	0.03
27	15.88	33.40E	5.56		20	15.88	33.39	5.56		24.56	340	0.07
52	15.80	33.35E	5.55		30	15.87	33.39	5.56		24.56	340	0.10
76	15.80	33.39E	5.57		50	15.81	33.35	5.55		24.54	342	0.17
101	13.18	33.13E	5.76		75	15.80	33.39	5.57		24.57	340	0.25
153	10.40	33.37E	5.01		100	13.20	33.13	5.76		24.93	306	0.34
200	8.93	33.78E	3.84		150	10.50	33.35	5.06		25.60	243	0.47
293	7.50	34.07E	2.83		200	8.93	33.78	3.84		26.18	188	0.58
391	6.30	34.07E	1.33		250	8.10	33.97	3.25		26.47	161	0.67
486	5.84	34.20E	0.77		300	7.42	34.07	2.74		26.63	146	0.75
584	5.38	34.36E	0.37		400	6.24	34.08	1.23		26.82	130	0.88
778	4.22	34.42E	0.46		500	5.78	34.22	0.68		26.99	115	1.01
971	3.82	34.56E	0.64		600	5.30	34.37	0.37		27.16	99	1.11
1172	3.35	34.49E	1.08		700	4.72	34.40	0.41		27.25	90	1.21
					800	4.14	(34.42)	0.49		(27.33)	(83)	(1.29)
					1000	3.75		0.73				

BLACK DOUGLAS; March 14, 1951; 0354 GCT; 32°50'N, 117°31.5'W; sounding, 480 fm; wind, 150°, force 1; weather, partly cloudy; sea, slight; wire angle, 04°. 93.30

0	14.96	33.35E	5.90	0.58	0	14.96	33.35	5.90	0.58	24.73	323	0.00
10	13.67	33.28E	6.18	0.67	10	13.67	33.28	6.18	0.67	24.95	302	0.03
25	12.65	33.35E	5.96	1.30	20	12.95	33.34	6.07	0.92	25.14	284	0.06
50	10.52	33.39E	4.62	1.85	30	12.35	33.36	5.75	1.48	25.27	272	0.09
75	10.00	33.73E	3.28	1.80u	50	10.52	33.39	4.62	1.85	25.62	239	0.14
99	9.74	34.02E	2.70	-	75	10.00	33.73	3.28		25.98	205	0.19
153	9.02	34.14E	2.40	2.15	100	9.74	34.03	2.69	(2.08)	26.26	179	0.24
199	8.86	34.22E	1.83	2.41	150	9.04	34.13	2.43	2.14	26.45	162	0.33
246	8.64	34.22E	1.50	2.47	200	8.86	34.22	1.83	2.41	26.55	153	0.41
293	8.27	34.26E	1.40	-	250	8.60	34.22	1.47	2.47	26.59	150	0.48
390	7.40	34.29E	0.89	2.87	300	8.20	34.26	1.39	2.68	26.68	142	0.56
484	6.62	34.33E	0.50	-	400	7.34	34.29	0.85	(2.88)	26.83	129	0.69
583	5.97	34.40E	0.49	-	500	6.51	34.34	0.50		26.99	115	0.81
679	5.46	34.42E	0.45	-	600	5.87	34.41	0.48		27.13	103	0.92
782	5.06	34.43E	0.40	-	700	5.37	34.42	0.45		27.19	97	1.02
					800	(5.00)	(34.43)			(27.25)	(92)	(1.12)

BLACK DOUGLAS; March 14, 1951; 0944 GCT; 32°30'N, 118°12.5'W; sounding, 940 fm; wind, calm; weather, clear; sea, slight; wire angle, 01°. 93.40

0	13.98	-	5.86	0.39	0	13.98	(33.24)	5.86	0.39	(24.85)	(311)	(0.00)
10	13.92	33.22E	5.95	-	10	13.92	33.22	5.95	0.38	24.85	312	0.03
25	13.26	33.21E	5.86	0.51	20	13.62	33.21	5.90	0.43	24.90	307	0.06
50	12.10	33.33E	5.71	0.72	30	13.24	33.21	5.82	0.57	24.98	300	0.09
74	11.93	33.44E	5.56	-	50	12.10	33.33	5.71	0.72	25.29	270	0.15
99	10.34	33.48E	4.39	1.35	75	11.92	33.44	5.54	0.89	25.42	259	0.22
153	9.02	33.90E	3.25	1.87	100	10.34	33.48	5.39	1.36	25.73	230	0.28
202	8.03	34.03E	2.87	2.03	150	9.05	33.89	3.27	1.85	26.26	180	0.38
297	7.47	34.16E	1.48	2.54	200	8.05	34.03	2.90	2.03	26.53	155	0.46
398	6.69	34.22E	0.95	-	250	7.72	34.10	2.33	2.28	26.63	146	0.54
494	6.17	34.31E	0.54	3.00	300	7.41	34.16	1.45	2.55	26.72	138	0.61
595	5.66	34.36E	0.58	-	400	6.67	34.22	0.95	2.86	26.87	125	0.74
791	4.88	34.49E	0.50	3.24	500	6.14	34.31	0.55	(3.01)	27.01	113	0.86
985	4.13	34.51E	0.71	3.24	600	5.64	34.36	0.57	(3.14)	27.11	104	0.97
1186	3.63	34.54E	0.96	3.21	700	5.22	34.44	0.54	(3.21)	27.23	94	1.07
					800	4.85	34.49	0.50	3.24	27.31	86	1.16
					1000	4.08	34.51	0.80	3.24	27.41	77	1.32

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5103

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
93.50	BLACK DOUGLAS; March 14, 1951; 1544 GCT; 32°10'N, 118°53.5'W; sounding, 700 fm; wind, calm; weather, clear; sea, slight; wire angle, 08°.											
0	13.48	33.16E	5.90	0.48	0	13.48	33.16	5.90	0.48	24.89	307	0.00
10	13.37	33.17E	5.95	0.57	10	13.37	33.17	5.95	0.57	24.92	305	0.03
25	13.32	33.28E	5.95	0.57	20	13.34	33.26	5.95	0.57	25.00	298	0.06
50	11.17	33.13E	5.44	0.98	30	13.27	33.28	5.92	0.58	25.03	295	0.09
75	9.94	33.28E	4.95	-	50	11.17	33.13	5.44	0.98	25.31	268	0.15
99	9.84	33.43E	4.33	-	75	9.94	33.28	4.95	(1.33)	25.64	238	0.21
152	8.71	34.04E	3.11	-	100	9.84	33.44	4.33	(1.57)	25.78	225	0.27
199	8.34	34.19E	2.25	2.28	150	8.73	34.03	3.15	(2.01)	26.42	164	0.36
293	7.68	34.22E	1.42	2.74	200	8.34	34.19	2.23	2.28	26.61	148	0.44
391	7.06	34.30E	0.99	2.94	250	7.99	34.21	1.70	2.56	26.68	142	0.51
486	6.27	34.34E	0.54	-	300	7.64	34.22	1.38	2.76	26.74	137	0.59
584	5.66	34.36E	0.36	-	400	6.99	34.30	0.95	(2.96)	26.89	123	0.72
777	4.88	34.54E	0.50	3.37	500	6.18	34.35	0.50		27.04	110	0.83
970	4.18	34.48E	0.79	-	600	5.58	(34.36)	0.36		(27.13)	(102)	(0.94)
1172	3.60	34.56E	1.04	3.22	700	5.17		0.40				
					800	4.80		0.52	3.37			
					1000	4.09		0.85	3.30			
93.60	BLACK DOUGLAS; March 14, 1951; 2125 GCT; 31°50'N, 119°34'W; sounding, 1600 fm; wind, 080°, force 1; weather, partly cloudy; sea, moderate; wire angle, 03°.											
0	15.44	33.34E	5.67	0.57	0	15.44	33.34	5.67	0.57	24.62	333	0.00
10	15.02	33.22E	5.63	0.50	10	15.02	33.22	5.63	0.50	24.62	334	0.03
25	14.97	33.34E	5.65	0.55	20	14.98	33.33	5.65	0.54	24.71	325	0.07
50	14.47	33.07uE	5.71	0.58	30	14.92	33.34	5.67	0.56	24.73	323	0.10
74	12.70	33.24E	5.81	-	50	14.47	33.24	5.71	0.58	24.75	322	0.16
99	11.03	33.18E	5.42	1.04	75	12.66	33.24	5.81	0.74	25.12	288	0.24
151	9.72	33.73E	3.85	1.39	100	10.88	33.18	5.38	1.04	25.40	261	0.31
198	8.86	33.96E	4.15u	1.62	150	9.72	33.72	3.86	1.38	26.02	203	0.43
293	7.02	34.12E	2.90	2.25	200	8.84	33.96	4.14	1.64	26.35	172	0.52
393	6.49	33.97E	1.58	2.90	250	7.90	34.08	3.50	1.95	26.73	137	0.60
489	5.59	34.13E	0.79	3.17	300	6.94	(34.12)	2.80	2.30	(26.76)	(135)	(0.67)
589	5.28	34.68E	0.47	-	400	6.46		1.51	2.93			
782	4.61	34.51E	0.55	3.31	500	5.54		0.73	(3.19)			
975	4.04	34.61E	0.64	3.27	600	5.25		0.47	(3.24)			
1177	3.53	34.58E	0.99	-	700	4.92		0.50	(3.28)			
					800	4.54		0.55	3.31			
					1000	3.96		0.68	(3.26)			
93.70	BLACK DOUGLAS; March 15, 1951; 0306 GCT; 31°29'N, 120°14'W; sounding, 2180 fm; wind, calm; weather, partly cloudy; sea, rough; wire angle, 05°.											
0	14.94	33.17E	5.80	0.59	0	14.94	33.17	5.80	0.59	24.60	335	0.00
10	14.49	33.22E	5.83	0.55	10	14.49	33.22	5.83	0.55	24.73	323	0.03
25	13.40	33.27E	5.76	0.59	20	13.80	33.27	5.78	0.57	24.91	306	0.06
50	12.76	33.16E	5.96	0.70	30	13.27	33.27	5.76	0.61	25.02	296	0.09
75	12.00	33.29E	5.18	0.80	50	12.76	33.16	5.96	0.70	25.03	295	0.15
98	10.40	33.34E	4.71	1.38	75	12.00	33.29	5.81	0.80	25.29	271	0.22
151	8.56	33.93E	3.18	2.00	100	10.25	33.34	4.63	1.41	25.64	238	0.29
197	7.98	34.04E	2.51	2.34	150	8.58	33.93	3.20	1.99	26.37	170	0.39
292	7.02	34.12E	1.74	2.65	200	7.95	34.05	2.50	2.35	26.56	152	0.47
391	5.64	34.03E	1.33	2.98	250	7.46	34.10	2.03	2.52	26.67	142	0.54
487	5.31	34.22E	0.72	3.18	300	6.90	34.12	1.71	2.68	26.76	134	0.61
587	5.22	34.29E	0.41	3.23	400	5.57	34.03	1.29	3.00	26.86	125	0.74
783	4.57	34.48E	0.48	3.28	500	5.30	34.24	0.66	3.20	27.06	107	0.86
980	4.03	34.56E	0.76	3.25	600	5.19	34.30	0.42	3.23	27.12	102	0.96
1184	3.46	34.45E	0.94	-	700	4.89	34.41	0.45	3.27	27.24	91	1.06
					800	4.50	34.49	0.50	3.28	27.35	82	1.15
					1000	3.98	(34.56)	0.79	(3.24)	(27.46)	(72)	(1.30)

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

BLACK DOUGLAS; March 15, 1951; 0832 GCT;[a] 31°10'N, 120°54.5'W; sounding, 2240 fm; wind, calm; weather, clear; sea, rough; wire angle, 10°. 93.80

656	4.67											
680	4.62											
704	4.60											
728	4.62											
752	4.58											
776	4.47											
800	4.46											
825	4.38											
852	4.26											
876	4.20											
901	4.10											
925	4.02											
950	3.96											
975	3.90											
1000	3.86											

BLACK DOUGLAS; March 15, 1951; 1015 GCT; 31°10'N, 120°54.5'W; sounding, 2240 fm; wind, calm; weather, clear; sea, rough; wire angle, 12°. 93.80

0	15.26	33.30E	5.66	0.44	0	15.26	33.30	5.66	0.44	24.63	333	0.00
10	15.18	33.14E	5.68	0.44	10	15.18	33.14	5.68	0.44	24.52	343	0.03
24	14.40	33.22E	5.76	0.50	20	14.87	33.22	5.72	0.48	24.65	331	0.07
49	14.19	33.12E	5.82	0.48	30	14.32	33.21	5.79	0.50	24.76	321	0.10
72	13.34	33.13E	5.70	-	50	14.19	33.12	5.82	0.48	24.72	325	0.16
97	11.86	33.15E	5.63	-	75	13.10	33.13	5.70		24.95	304	0.24
148	9.60	33.37E	4.71	-	100	11.67	33.16	5.62		25.24	276	0.32
194	8.66	33.91E	2.99	2.14	150	9.55	33.38	4.66		25.78	225	0.44
284	7.42	34.14E	2.44	-	200	8.57	33.93	2.91		26.37	170	0.54
380	5.97	34.07E	1.72	-	250	7.87	34.09	2.52		26.60	149	0.62
471	5.53	34.25E	0.78	3.03	300	7.17	34.14	2.39		26.74	136	0.69
568	5.06	34.24E	0.48	3.20	400	5.84	34.08	1.49		26.87	124	0.82
747	4.57	34.42E	0.50	3.32	500	5.40	34.19	0.62	3.09	27.01	112	0.94
947	3.98	34.50E	0.66	3.25	600	4.94	34.25	0.49	3.23	27.11	103	1.05
1146	3.52	34.53E	1.01	-	700	4.68	34.35	0.50	3.30	27.22	93	1.15
					800	4.45	34.45	0.52	3.32	27.32	84	1.23
					1000	3.84	34.51	0.76		27.43	74	1.39

BLACK DOUGLAS; March 15, 1951; 1554 GCT; 30°50'N, 121°35'W; sounding, 2260 fm; wind, calm; weather, clear; sea, moderate; wire angle, 03°. 93.90

0	15.85	33.49E	5.63	0.50	0	15.85	33.49	5.63	0.50	24.64	331	0.00
10	15.86	33.38E	5.57	-	10	15.86	33.38	5.57	0.46	24.56	339	0.03
25	15.78	33.42E	5.61	0.48	20	15.82	33.42	5.57	0.47	24.60	336	0.07
50	15.76	33.39E	5.59	0.58	30	15.78	33.42	5.61	0.51	24.60	336	0.10
75	15.76	33.49E	5.61	-	50	15.76	33.39	5.59	0.58	24.59	338	0.17
99	13.84	33.35E	5.68	0.66	75	15.76	33.49	5.61	0.56	24.66	331	0.25
152	11.60	33.64E	4.90	-	100	13.50	33.35	5.67	(0.68)	25.04	296	0.33
					150	11.66	33.64	4.94		25.62	242	0.46

a) Test cast.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

97.32 BLACK DOUGLAS; March 13, 1951; 0221 GCT; 32°11.5'N; 117°17'W; sounding, 760 fm; wind, 340°, force 3; weather, clear; sea, moderate; wire angle, 24°.

0	13.54	33.40E	6.05	0.53	0	13.54	33.40	6.05	0.53	25.07	291	0.00
9	13.42	33.33E	5.10	0.52	10	13.40	33.33	5.10	0.52	25.04	294	0.03
23	12.64	33.40E	6.00	0.61	20	12.69	33.39	6.00	0.56	25.23	276	0.06
46	10.52	33.44E	4.20	1.45	30	12.40	33.41	5.95	0.98	25.30	269	0.08
69	9.92	33.58E	4.05	1.56	50	10.38	33.45	4.15	1.48	25.70	232	0.14
91	9.26	33.78E	3.49	-	75	9.73	33.63	4.02	1.59	25.95	208	0.19
138	8.90	34.02E	2.59	2.15	100	9.17	33.83	3.21	1.84	26.20	185	0.24
178	8.66	34.18E	2.31	-	150	8.83	34.07	2.50	(2.21)	26.44	163	0.33
261	8.12	34.31E	1.47	2.63	200	8.52	34.24	2.18	(2.41)	26.62	147	0.40
352	7.40	34.27E	1.08	2.88	250	8.20	34.31	1.65	(2.60)	26.72	138	0.48
438	6.68	34.29E	0.82	3.02	300	7.82	34.30	1.17	2.75	26.77	134	0.54
530	6.20	34.38E	0.44	-	400	7.00	34.27	0.99	2.97	26.87	126	0.67
715	5.22	34.42E	0.50	-	500	6.34	34.36	0.51	(3.10)	27.03	111	0.79
902	4.56	34.45E	0.49	3.28	600	5.86	34.40	0.47	(3.20)	27.12	104	0.90
1101	3.88	-	0.70	-	700	5.30	34.42	0.50	(3.25)	27.20	96	1.00
					800	4.89	34.43	0.50	(3.27)	27.26	91	1.09
					1000	(4.24)	(34.45)	0.59		(27.35)	(84)	(1.27)

97.40 BLACK DOUGLAS; March 12, 1951; 2112 GCT; 31°55.5'N, 117°50'W; sounding, 760 fm; wind, 340°, force 2; weather, clear; sea, rough; wire angle, 13°.

0	14.40	33.37E	5.80	0.53	0	14.40	33.37	5.80	0.53	24.87	310	0.00
10	14.20	33.28E	5.83	0.57	10	14.20	33.28	5.83	0.57	24.84	313	0.03
24	14.14	33.55uE	5.81	0.55	20	14.17	33.29	5.81	0.56	24.86	311	0.06
49	14.09	33.33E	5.83	0.55	30	14.14	33.32	5.81	0.55	24.89	309	0.09
72	12.69	33.28E	5.51	0.79	50	14.09	33.33	5.83	0.55	24.90	308	0.15
96	11.00	33.51E	4.81	1.18	75	12.44	33.28	5.46	0.86	25.19	281	0.22
146	9.58	33.80E	3.52	-	100	10.80	33.57	4.55	1.22	25.72	231	0.29
190	9.06	33.98E	3.14	1.97	150	9.50	33.82	3.47	1.82	26.14	192	0.39
279	8.19	34.20E	1.67	2.62	200	8.96	34.02	3.00	2.02	26.38	170	0.48
372	7.08	34.20E	1.44	-	250	8.47	34.16	1.99	2.42	26.56	153	0.56
461	6.59	34.29E	0.68	-	300	7.95	34.20	1.55	(2.70)	26.67	143	0.64
556	5.96	34.34E	0.41	3.24	400	6.92	34.22	1.29	(3.00)	26.84	128	0.77
741	4.94	34.45E	0.48	3.30	500	6.35	34.31	0.54	(3.21)	26.98	115	0.90
929	4.18	34.48E	0.50	3.30	600	5.68	34.36	0.45	3.26	27.11	104	1.01
1126	3.60	34.55E	-	3.22	700	5.15	34.42	0.48	3.29	27.22	94	1.10
					800	4.68	34.47	0.50	3.30	27.31	86	1.19
					1000	3.95	34.50		3.28	27.42	77	1.36

97.50 BLACK DOUGLAS; March 12, 1951; 1451 GCT; 31°35.5'N, 118°30'W; sounding, 1060 fm; wind, 340°, force 2; weather, clear; sea, rough; wire angle, 03°.

0	13.92	33.31E	5.75	0.51	0	13.92	33.31	5.75	0.51	24.92	305	0.00
10	13.92	33.17E	-	0.51	10	13.92	33.17		0.51	24.81	315	0.03
25	13.90	33.22E	5.60	-	20	13.90	33.22		0.52	24.85	311	0.06
51	13.33	33.17E	5.84	0.54	30	13.88	33.22	5.64	0.52	24.86	311	0.09
75	11.36	33.13E	5.48	0.87	50	13.35	33.17	5.85	0.54	24.93	305	0.16
100	10.17	33.22E	4.97	1.16	75	11.36	33.13	5.48	0.87	25.28	272	0.23
154	9.01	33.84E	3.25	1.86	100	10.17	33.22	4.97	1.16	25.56	246	0.29
201	8.25	34.13E	2.98	-	150	9.10	33.80	3.33	1.82	26.19	187	0.40
298	7.63	34.21E	1.67	2.72	200	8.26	34.13	2.98	(2.04)	26.57	151	0.49
397	6.56	34.28E	1.13	-	250	7.90	34.18	2.27	2.46	26.67	143	0.56
494	6.12	34.41uE	0.65	-	300	7.62	34.21	1.64	(2.74)	26.73	137	0.63
595	5.60	34.38E	0.45	-	400	6.54	34.28	1.12	(3.08)	26.94	119	0.76
792	4.76	34.45E	0.48	3.26	500	6.10	34.34	0.64	(3.16)	27.04	110	0.87
986	4.05	34.51E	0.70	-	600	5.57	34.38	0.45	(3.20)	27.14	101	0.98
1189	3.54	34.61E	0.99	3.10	700	5.12	34.41	0.45	(3.24)	27.22	95	1.07
					800	4.73	34.45	0.49	3.26	27.29	88	1.17
					1000	4.00	34.52	0.73	3.23	27.43	76	1.33

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

BLACK DOUGLAS; March 12, 1951; 0751 GCT; 31°15'N, 119°11'W; sounding, 2010 fm; wind, 340°, force 3; weather, clear; sea, very rough; wire angle, 13°. 97.60

0	14.88	33.22E	5.62	-	0	14.88	33.22	5.62		24.65	330	0.00
10	14.88	33.22E	5.71	-	10	14.88	33.22	5.71		24.65	331	0.03
24	14.82	33.22E	5.34	0.37	20	14.85	33.22	5.45		24.65	331	0.07
49	14.42	33.21E	5.74	-	30	14.81	33.22	5.37	0.37	24.66	330	0.10
72	14.20	33.13E	5.73	0.37	50	14.40	33.21	5.74	0.40	24.74	323	0.16
97	12.92	33.12E	5.63	0.54	75	14.16	33.13	5.72	0.38	24.73	324	0.25
148	10.71	33.46E	4.99	-	100	12.69	33.12	5.61	0.60	25.02	297	0.32
194	9.03	33.81E	3.42	1.77	150	10.65	33.48	4.96	1.29	25.67	236	0.46
285	7.74	34.07E	2.44	-	200	8.90	33.85	3.35	(1.82)	26.25	181	0.56
382	6.50	34.11E	1.23	2.54	250	8.11	34.02	2.81	(2.11)	26.51	158	0.65
476	5.71	34.21E	0.75	2.99	300	7.56	34.08	2.23	(2.33)	26.64	146	0.72
574	5.45	34.33E	0.48	-	400	6.31	34.12	1.12	2.60	26.84	128	0.86
766	4.79	34.45E	0.41	3.17	500	5.60	34.24	0.66	(3.04)	27.02	111	0.98
957	4.25	34.55E	0.54	-	600	5.39	34.35	0.47	(3.17)	27.14	101	1.08
1159	3.63	34.54uE	0.91	-	700	5.06	34.41	0.42	(3.18)	27.22	94	1.18
					800	4.67	34.47	0.41		27.32	85	1.27
					1000	4.12	(34.55)	0.62		(27.44)	(75)	(1.43)

BLACK DOUGLAS; March 12, 1951; 0126 GCT; 30°55'N, 119°50.5'W; sounding, 2120 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 04°. 97.70

0	15.25	33.38E	5.43	0.52	0	15.25	33.38	5.43	0.52	24.69	327	0.00
10	15.25	33.24E	5.68	0.52	10	15.25	33.24	5.68	0.52	24.58	337	0.03
25	15.22	33.28E	5.54	-	20	15.23	33.26	5.57	0.52	24.60	335	0.07
50	15.16	33.28E	5.52	0.56	30	15.20	33.28	5.52	0.52	24.62	334	0.10
74	13.90	33.11E	5.70	0.62	50	15.16	33.28	5.52	0.56	24.64	333	0.17
98	13.34	33.13E	5.71	0.73	75	13.90	33.11	5.70	0.62	24.77	321	0.25
150	10.85	33.21E	5.24	1.19	100	13.29	33.13	5.70	0.74	24.91	308	0.33
198	9.07	33.60E	3.71	1.77	150	10.85	33.21	5.24	1.19	25.43	259	0.47
293	7.70	34.00E	2.42	2.30	200	9.02	33.62	3.68	1.79	26.06	200	0.58
393	6.31	34.05E	1.98	2.83	250	8.18	33.91	2.80	2.09	26.41	167	0.68
489	5.46	34.18E	0.86	3.08	300	7.61	34.00	2.39	2.34	26.57	153	0.76
590	5.02	34.27E	0.55	-	400	6.21	34.06	1.92	2.85	26.81	131	0.90
788	4.42	34.43E	0.53	3.40	500	5.39	34.19	0.80	(3.10)	27.01	112	1.02
984	3.96	34.52E	0.83	-	600	4.99	34.28	0.55	(3.29)	27.13	101	1.13
1187	3.40	34.53E	1.03	-	700	4.69	34.36	0.52	(3.36)	27.23	93	1.22
					800	4.38	34.44	0.55		27.32	84	1.31
					1000	3.92	34.52	0.85		27.43	75	1.47

BLACK DOUGLAS; March 11, 1951; 1820 GCT; 30°35.5'N, 120°31'W; sounding, 2120 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 19°. 97.80

0	14.82	33.30E	5.64	-	0	14.82	33.30	5.64	0.45	24.72	323	0.00
10	14.80	33.21E	5.60	0.42	10	14.80	33.21	5.60	0.42	24.66	330	0.03
27	14.78	33.30E	5.61	0.50	20	14.79	33.29	5.60	0.46	24.72	324	0.07
54	14.15	33.12E	5.59	-	30	14.78	33.30	5.60	0.50	24.73	323	0.10
76	13.71	33.22E	5.60	0.51	50	14.29	33.12	5.60	0.52	24.70	327	0.16
100	12.72	33.27E	5.56	0.69	75	13.72	33.22	5.60	0.51	24.89	309	0.24
137	9.94	-	4.82	-	100	12.72	33.27	5.56	0.69	25.13	287	0.32
175	-	33.78E	4.38	1.20	150	9.61	33.70	4.64	1.02	26.02	202	0.44
250	8.36	34.05E	3.42	-	200	8.93	33.94	4.13	1.43	26.32	175	0.53
330	7.11	34.04E	3.19	2.12	250	8.36	34.05	3.42	1.81	26.50	159	0.62
408	6.16	34.20uE	2.18	2.67	300	7.64	34.05	3.25	2.02	26.60	150	0.69
487	5.70	34.18E	0.95	2.96	400	6.24	34.09	2.40	2.62	26.91	121	0.83
678	4.97	34.40E	0.39	3.16	500	5.64	34.19	0.88	(2.99)	26.98	115	0.95
817	4.39	34.49E	0.55	3.22	600	5.25	34.31	0.49	(3.10)	27.12	102	1.06
1002	3.88	34.52E	0.75	3.23	700	4.89	34.42	0.40	(3.17)	27.25	91	1.15
					800	4.47	34.48	0.52	3.22	27.35	82	1.24
					1000	3.89	34.52	0.75	3.23	27.44	74	1.40

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^5 cm^3/g$	ΔD dyn m
97.90	BLACK DOUGLAS; March 11, 1951; 0956 GCT; 30°15'N, 121°11'W; sounding, 2140 fm; wind, 340°, force 6; weather, clear; sea, very rough; wire angle, 10°.											
0	15.44	33.37E	5.74	-	0	15.44	33.37	5.74		24.64	331	0.00
10	15.44	33.24E	5.66	0.49	10	15.44	33.24	5.66	0.49	24.54	341	0.03
24	15.44	33.33E	5.61	0.53	20	15.44	33.28	5.62	0.52	24.57	338	0.07
49	15.40	33.49E	5.57	0.47	30	15.44	33.40	5.59	0.53	24.66	330	0.10
72	14.92	33.37E	5.61	0.57	50	15.39	33.49	5.57	0.47	24.74	323	0.17
97	11.43	33.39E	5.06	1.01	75	14.87	33.37	5.57	0.59	24.76	321	0.25
148	9.65	33.69E	4.19	-	100	11.17	33.40	4.95	(1.08)	25.52	250	0.32
195	8.82	33.96E	3.69	-	150	9.60	33.71	4.16	(1.53)	26.03	202	0.43
287	7.80	34.22E	2.16	2.39	200	8.75	33.98	3.62	(1.93)	26.38	169	0.52
385	6.28	34.18E	1.57	2.73	250	8.18	34.17	2.76	(2.21)	26.62	148	0.60
479	5.78	34.25E	0.91	2.96	300	7.62	34.22	2.01	2.44	26.74	137	0.67
579	5.33	34.40E	0.54	3.10	400	6.17	34.18	1.51	2.77	26.91	121	0.80
774	4.71	34.43E	0.39	-	500	5.68	(34.28)	0.75	2.99	(27.05)	(109)	(0.92)
970	4.04	34.58E	0.73	3.15	600	5.26		0.52	(3.12)			
					700	4.92		0.41	(3.21)			
					800	4.62		0.41	(3.23)			
					1000	(3.91)		(0.80)				
100.30	BLACK DOUGLAS; March 8, 1951; 2239 GCT; 31°40.5'N, 116°46.5'W; sounding, 260 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 22°.											
0	12.16	33.46E	5.58	0.62	0	12.16	33.46	5.58	0.62	25.38	260	0.00
9	11.40	33.55E	5.34	0.82	10	11.32	33.56	5.35	0.88	25.62	238	0.02
23	10.30	33.71E	3.47	-	20	10.52	33.69	3.60	1.43	25.86	215	0.05
46	9.87	33.95E	-	1.89	30	10.13	33.80		1.73	26.01	201	0.07
67	9.78	34.05E	1.94	2.00	50	9.84	33.97		1.92	26.19	184	0.11
93	9.65	34.09E	1.58	-	75	9.75	34.07	1.78	2.04	26.29	176	0.15
142	9.30	34.22E	1.75u	2.42	100	9.59	34.10	1.53	2.26	26.34	172	0.20
188	9.18	34.23E	1.07	-	150	9.26	34.22		(2.43)	26.49	159	0.28
234	8.90	34.29E	0.98	-	200	9.12	34.24	1.05		26.53	156	0.36
280	8.60	34.33E	0.96	2.70	250	8.79	34.31	0.97		26.63	146	0.43
333	8.00	34.27E	1.00	-	300	8.40	34.31	0.96		26.69	141	0.50
100.40	BLACK DOUGLAS; March 9, 1951; 0809 GCT; 31°21'N, 117°27'W; sounding, 1040 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 09°.											
0	13.75	33.28E	5.92	-	0	13.75	33.28	5.92		24.93	304	0.00
10	13.76	33.30E	5.89	0.34	10	13.76	33.30	5.89	0.34	24.94	303	0.03
25	13.57	33.39E	5.76	0.33	20	13.67	33.34	5.83	0.33	24.99	298	0.06
49	11.97	33.44E	5.19	0.78	30	13.42	33.41	5.69	0.34	25.10	288	0.09
74	10.38	33.49E	3.89	1.38	50	11.93	33.44	5.17	0.94	25.41	259	0.14
98	9.95	33.64E	3.51	1.51	75	10.37	33.50	3.88	1.39	25.74	228	0.21
152	9.32	33.95E	3.07	1.81	100	9.92	33.65	3.49	1.52	25.93	210	0.26
200	8.90	34.27uE	2.33	-	150	9.33	33.94	3.10	1.79	26.26	180	0.36
294	8.20	34.27E	1.06	-	200	8.90	34.19	2.33	(2.13)	26.52	156	0.44
391	7.23	34.27E	0.85	2.87	250	8.53	34.25	1.45	(2.51)	26.64	146	0.52
485	-	34.33E	0.50	-	300	8.15	34.27	1.03	(2.65)	26.70	141	0.59
583	5.74	34.33E	0.36	3.10	400	7.14	34.27	0.84	2.90	26.85	128	0.72
775	4.78	34.38E	0.42	-	500	6.33	34.33	0.47	3.00	27.00	114	0.84
968	4.14	34.49E	0.73	3.16	600	5.63	34.33	0.36	3.11	27.09	106	0.95
1169	3.60	34.49E	0.96	3.20	700	5.12	34.36	0.36	3.15	27.18	98	1.06
					800	4.68	34.39	0.45	3.16	27.25	91	1.15
					1000	4.04	34.49	0.79	3.16	27.40	78	1.32

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

BLACK DOUGLAS; March 9, 1951; 1608 GCT; 31°01'N, 118°07'W; sounding, 980 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 20°. 100.50

0	14.28	33.33E	5.74	0.46	0	14.28	33.33	5.74	0.46	24.86	310	0.00
10	14.29	33.30E	5.60	0.41	10	14.29	33.30	5.60	0.41	24.83	313	0.03
24	14.28	33.31E	5.57	0.37	20	14.28	33.31	5.57	0.37	24.85	312	0.06
53	13.79	33.28E	5.53	0.56	30	14.27	33.31	5.56	0.38	24.85	312	0.09
76	11.55	33.33E	5.14	0.99	50	14.26	33.28	5.54	0.52	24.83	315	0.16
104	10.72	33.60E	3.93	1.36	75	11.73	33.33	5.16	0.97	25.36	264	0.23
155	9.66	33.84E	3.11	1.77	100	10.82	33.52	4.07	1.32	25.68	235	0.29
205	8.93	34.11E	2.29	2.12	150	9.76	33.82	3.16	1.73	26.09	196	0.40
306	7.60	34.31E	1.50	-	200	9.01	34.09	2.39	2.08	26.43	165	0.49
412	6.82	34.43E	0.73	2.93	250	8.31	34.22	1.99	(2.37)	26.63	146	0.57
513	6.26	34.56E	0.50	-	300	7.67	34.30	1.57	(2.59)	26.79	131	0.64
613	5.60	34.40E	0.36	3.11	400	6.89		0.79	(2.94)			
814	4.66	34.51E	0.41	3.11	500	6.32		0.52	3.09			
1024	3.91	34.60E	0.66	3.12	600	5.68		0.37	3.12			
1229	3.44	34.59E	0.90	3.10	700	5.16		0.36	3.11			
					800	4.72		0.40	3.11			
					1000	3.98		0.62	3.12			

BLACK DOUGLAS; March 9, 1951; 2236 GCT; 30°41'N, 118°47.5'W; sounding, 1500 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 23°. 100.60

0	14.42	33.33E	5.76	-	0	14.42	33.33	5.76		24.83	313	0.00
9	14.41	33.30E	5.94	-	10	14.40	(33.30)	5.92		(24.81)	(315)	(0.03)
23	14.38	-	5.82	0.55	20	14.39	(33.33)	5.82	0.54	(24.84)	(313)	(0.06)
52	14.31	33.44E	5.86	-	30	14.37	(33.39)	5.82	(0.57)	(24.89)	(309)	(0.09)
74	11.88	33.13E	5.63	-	50	14.31	(33.44)	5.85	(0.74)	(24.94)	(304)	(0.16)
101	10.72	33.31E	5.09	1.17	75	11.87	33.13	5.63	(0.84)	25.18	281	(0.23)
147	9.44	33.69E	3.94	1.67	100	10.75	33.30	5.14	(1.15)	25.52	250	(0.29)
194	8.82	33.98E	3.00	2.02	150	9.40	33.71	3.86	1.70	26.06	199	(0.41)
286	7.88	34.22E	1.58	2.55	200	8.76	34.00	2.91	2.06	26.39	168	(0.50)
384	6.96	34.38E	1.04	-	250	8.25	34.15	2.11	2.36	26.59	150	(0.58)
477	6.24	34.43E	0.52	3.07	300	7.75	34.25	1.49	2.62	26.74	136	(0.65)
571	5.80	34.40E	0.43	3.13	400	6.84	34.39	0.94	3.01	26.98	114	(0.77)
763	4.82	34.54E	0.39	-	500	6.12	34.42	0.48	3.08	27.10	104	(0.88)
960	4.10	34.50E	0.88	-	600	5.68		0.42				
1155	3.60	34.52E	0.79	3.07	700	5.17		0.40				
					800	4.65		0.45				
					1000	4.00		0.88				

BLACK DOUGLAS; March 10, 1951; 0503 GCT; 30°20.5'N, 119°27'W; sounding, 2100 fm; wind, 320°, force 4; partly cloudy; sea, very rough; wire angle, 15°. 100.70

0	14.30	33.21E	5.94	0.56	0	14.30	33.21	5.94	0.56	24.76	320	0.00
12	14.32	33.14E	5.93	0.58	10	14.31	33.14	5.94	0.58	24.71	325	0.03
26	14.28	33.19E	5.80	0.48	20	14.30	33.16	5.85	0.49	24.72	324	0.06
49	14.19	33.31E	5.77	0.54	30	14.26	33.21	5.79	0.48	24.77	320	0.10
71	13.02	33.12E	5.61	-	50	14.17	33.31	5.77	0.55	24.87	311	0.16
92	11.96	33.26E	5.47	0.90	75	12.75	33.12	5.59	0.76	25.01	298	0.24
137	10.50	33.49E	5.03	-	100	11.64	33.31	5.41	0.97	25.36	265	0.31
174	9.80	33.80E	3.28	1.87	150	10.23	33.57	4.25	1.62	25.82	222	0.43
253	8.52	34.16E	2.24	2.29	200	9.36	33.96	2.90	2.02	26.27	180	0.53
334	7.73	34.22E	1.34	-	250	8.57	34.16	2.29	2.28	26.55	154	0.61
414	7.21	34.34E	0.82	-	300	8.02	34.20	1.67	2.54	26.66	144	0.69
498	6.20	34.33E	0.56	3.18	400	7.29	34.33	0.89	3.00	26.87	125	0.82
667	5.29	34.42E	0.46	3.27	500	6.19	34.33	0.56	3.18	27.02	112	0.94
840	4.46	34.52E	0.59	-	600	5.62	34.38	0.46	3.25	27.13	102	1.05
1030	3.88	34.58E	0.77	-	700	5.14	34.44	0.50		27.24	92	1.14
					800	4.64	34.50	0.57		27.34	83	1.23
					1000	3.96	34.57	0.74		27.47	72	1.39

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
100.80	BLACK DOUGLAS; March 10, 1951; 1218 GCT; 30°01'N, 120°07'W; sounding, 2100 fm; wind, 340°, force 4; weather, overcast; sea, very rough; wire angle, 18°.											
0	15.72	33.40E	5.62	0.46	0	15.72	33.40	5.62	0.46	24.60	335	0.00
10	15.72	33.32E	5.48	0.40	10	15.72	33.32	5.48	0.40	24.54	341	0.03
24	15.71	33.37E	5.57	0.43	20	15.71	33.35	5.54	0.43	24.57	339	0.06
47	15.74	33.44E	5.57	0.43	30	15.71	33.39	5.57	0.43	24.60	336	0.10
70	15.72	33.35E	5.39	0.44	50	15.74	33.44	5.55	0.43	24.63	334	0.17
92	15.52	33.46E	5.65	0.48	75	15.70	33.36	5.42	0.45	24.58	339	0.25
137	11.77	33.33E	5.26	0.78	100	14.66	33.45	5.64	0.51	24.87	312	0.33
176	10.26	33.65E	4.18	1.27	150	11.15	33.35	4.90	0.90	25.49	254	0.48
257	8.64	34.15E	2.78	-	200	9.74	33.84	3.65		26.11	195	0.59
340	7.04	34.14E	1.82	-	250	8.76	34.14	2.87		26.50	159	0.68
424	6.21	34.16E	1.20	-	300	7.85	34.15	2.30		26.65	145	0.75
513	5.86	34.29E	0.70	2.98	400	6.35	34.15	1.35		26.86	126	0.89
691	4.94	34.40E	0.38	3.10	500	5.90	34.27	0.77	(2.96)	27.01	112	1.01
870	4.38	34.52E	0.63	3.09	600	5.47	34.35	0.48	3.05	27.13	102	1.11
1063	3.81	34.52E	0.89	-	700	4.89	34.40	0.39	3.10	27.24	92	1.21
					800	4.55	34.48	0.51	3.09	27.34	83	1.30
					1000	4.03	34.52	0.83		27.42	76	1.46
100.90	BLACK DOUGLAS; March 10, 1951; 1848 GCT; 29°40.5'N, 120°47'W; sounding, 2200 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 20°.											
0	16.08	33.46E	5.48	-	0	16.08	33.46	5.48		24.56	338	0.00
9	16.09	33.39E	5.52	0.49	10	16.09	33.39	5.52	0.49	24.51	344	0.03
23	16.08	33.42E	5.57	0.46	20	16.08	33.41	5.56	0.46	24.53	343	0.07
52	16.10	33.51E	5.43	0.52	30	16.09	33.46	5.55	0.46	24.56	340	0.10
75	16.09	33.40E	5.46	0.47	50	16.10	33.51	5.44	0.52	24.60	337	0.17
102	15.38	33.37E	5.53	0.48	75	16.09	33.40	5.46	0.47	24.52	345	0.26
153	12.74	33.55E	5.03	0.73	100	15.46	33.37	5.50	0.48	24.64	334	0.34
203	10.23	33.73E	4.55	1.19	150	12.90	33.53	5.09	0.70	25.29	273	0.49
303	8.00	34.14E	2.88	-	200	10.37	33.72	4.56	1.16	25.91	214	0.61
408	6.90	34.20E	1.40	2.72	250	8.91	33.95	3.83	(1.64)	26.33	175	0.71
509	5.92	34.33E	0.97	2.89	300	8.05	34.13	2.94	(2.05)	26.60	150	0.79
610	5.28	34.27E	0.45	-	400	6.98	34.20	1.49	(2.70)	26.81	131	0.93
809	4.55	34.40E	0.51	3.08	500	6.00		0.99	2.88			
1014	3.92	34.58E	0.74	-	600	5.34		0.49	3.03			
1213	3.44	34.54E	0.88	2.97	700	4.91		0.47	3.07			
					800	4.58		0.51	3.08			
					1000	3.97		0.73	3.09			
100.100	BLACK DOUGLAS; March 11, 1951; 0036 GCT; 29°20.5'N, 121°27'W; sounding, 2240 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 22°.											
0	16.52	33.51E	5.50	0.48	0	16.52	33.51	5.50	0.48	24.50	344	0.00
9	16.54	33.49E	5.34	0.45	10	16.54	33.49	5.34	0.45	24.48	346	0.03
23	16.52	33.51E	5.44	0.47	20	16.52	33.50	5.42	0.47	24.50	345	0.07
46	16.54	33.69E	5.52	0.45	30	16.52	33.60	5.50	0.47	24.57	338	0.10
70	16.58	33.62E	5.37	0.45	50	16.55	33.69	5.52	0.45	24.64	333	0.17
92	16.61	33.55E	5.49	0.49	75	16.60	33.60	5.37	0.46	24.55	342	0.25
139	12.35	33.35E	5.53	0.73	100	16.57	33.52	5.53	0.52	24.50	348	0.34
181	10.70	33.69E	4.68	1.16	150	11.83	33.36	5.36	0.82	25.37	265	0.49
266	8.41	34.04E	3.49	1.84	200	10.09	33.81	4.40	1.34	26.03	203	0.61
356	7.18	34.13E	1.94	2.51	250	8.77	33.99	3.71	1.72	26.39	170	0.70
446	6.74	34.27E	1.02	2.95	300	7.84	34.09	2.90	2.08	26.60	149	0.78
540	5.76	34.20E	0.72	-	400	6.91	34.21	1.41	2.78	26.83	129	0.92
724	4.94	34.43E	0.42	-	500	6.20	34.23	0.84		26.94	119	1.05
910	4.21	34.54E	0.52	3.24	600	5.44	34.26	0.56		27.06	109	1.16
1106	3.68	34.58E	0.77	-	700	5.04	34.41	0.43		27.23	93	1.26
					800	4.64	34.48	0.43		27.33	84	1.35
					1000	3.92	34.56	0.64		27.47	72	1.51

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 8, 1951; 1129 GCT; 30°54'N, 116°45'W; sounding, 1135 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 30°. 103.35

0	13.74		4.42	-	0	13.74	4.42	
8	13.77	33.31	4.38	0.39	10	13.76	4.39	(0.39)
22	13.76		4.96	-	20	13.76	4.93	(0.39)
47	13.68		5.15	0.43	30	13.73	5.08	(0.40)
68	12.07		4.51	0.73	50	13.66	5.13	0.45
90	10.36		3.63	1.21	75	11.50	4.15	0.95
129	9.56		2.70	1.67	100	10.09	3.33	1.34
169	8.64		2.35	-	150	9.07	2.49	1.87
249	8.21		2.07	2.61	200	8.39	2.23	2.30
333	7.70		1.66	2.94	250	8.20	2.07	2.62
413	7.09		-	2.95	300	7.92	1.88	2.86
494	6.48		0.40	3.02	400	7.18	1.02	2.95
661	5.41		0.26	3.09	500	6.43	0.39	3.02
839	4.71		0.26	-	600	5.77	0.30	3.06
1042	4.02		0.49	-	700	5.21	0.27	
					800	4.84	0.27	
					1000	4.17	0.43	

CREST; March 8, 1951; 1533 GCT; 30°44'N, 117°05.5'W; sounding, 850 fm; wind, 350°, force 4; weather, cloudy; sea, moderate; wire angle, 10°. 103.40

0	14.22		5.55	-	0	14.22	5.55	
10	14.24	33.31	-	-	10	14.24	5.27	
25	14.24		5.07	0.66	20	14.24	5.11	
49	13.28		4.46r	0.74	30	14.22	5.07	0.67
73	11.28		5.55	-	50	13.25	5.23	0.75
97	10.54		3.96	1.44	75	11.16	5.53	1.16
149	9.56		2.44	2.16	100	10.50	3.70	1.63
196	8.54		2.43	2.23	150	9.51	2.44	2.17
290	7.54		1.46	-	200	8.46	2.42	2.24
390	7.16		0.52	-	250	7.81	2.02	
487	6.40		0.32	-	300	7.48	1.35	
594	5.66		0.36	3.28	400	7.12	0.48	
791	4.73		0.48	-	500	6.28	0.32	
997	4.02		0.62	-	600	5.62	0.37	
1204	3.54		0.80	-	700	5.11	0.42	
					800	4.69	0.49	
					1000	4.01	0.62	

CREST; March 8, 1951; 2130 GCT; 30°28'N, 117°45.5'W; sounding, 1450 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 26°. 103.50

0	15.20		5.56	-	0	15.20	5.56	
9	15.26	33.38	5.58	0.39	10	15.26	5.58	0.39
22	15.26		5.57	0.47	20	15.25	5.57	0.46
49	14.76		5.58	0.43	30	15.00	5.57	0.46
71	14.24		5.61	0.43	50	14.73	5.58	0.43
96	11.63		5.18	0.86	75	13.70	5.60	0.44
139	9.85		4.47	1.25	100	11.43	5.10	0.92
182	8.86		3.76	-	150	9.55	4.30	(1.35)
266	8.33		1.75	2.43	200	8.67	3.33	(1.82)
355	7.48		0.92	-	250	8.39	1.98	(2.29)
440	6.79		0.55	2.95	300	8.05	1.38	
526	6.04		0.36	-	400	7.08	0.69	
698	5.24		0.28	3.19	500	6.28	0.41	3.11
881	4.37		0.46	-	600	5.65	0.30	3.17
1070	3.81		0.61	3.19	700	5.24	0.28	(3.19)
					800	4.78	0.37	(3.19)
					1000	3.98	0.57	(3.19)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
103.60	CREST; March 9, 1951; 0326 GCT; 30°07'N, 118°23'W; sounding, 1650 fm; wind, 240°, force 5; weather, cloudy; sea, rough; wire angle, 33°.							
0	15.53		5.00	-	0	15.53	5.00	
9	15.54	33.40	5.05	-	10	15.54	5.05	
23	15.54		5.19	-	20	15.54	5.15	
50	14.29		5.35	0.55	30	15.54	5.28	
73	12.36		5.09	-	50	14.29	5.35	0.55
100	10.42		5.12	-	75	12.22	5.10	0.82
149	9.40		4.12	2.16	100	10.42	5.12	1.14
197	8.62		3.42	-	150	9.36	4.10	(2.17)
298	7.40		1.90	-	200	8.56	3.39	
402	7.26		0.68	-	250	7.87	2.71	
500	6.22		0.41	3.13	300	7.39	1.86	
604	5.59		0.30	3.23	400	7.26	0.69	
811	4.54		0.38	-	500	6.22	0.41	3.13
1021	3.99		0.56	-	600	5.61	0.31	
					700	5.09	0.32	
					800	4.59	0.37	
					1000	4.02	0.52	
103.70	CREST; March 9, 1951; 0933 GCT; 29°46'N, 119°01'W; sounding, 1950 fm; wind, 320°, force 5; weather, cloudy; sea, missing; wire angle, 25°.							
0	14.14		5.61	-	0	14.14	5.61	
10	14.16	33.37	5.66	0.49	10	14.16	5.66	0.49
23	14.14		5.68	0.49	20	14.16	5.67	0.49
50	13.95		5.62	0.51	30	14.12	5.68	0.49
71	10.94		4.22	1.36	50	13.95	5.62	0.51
95	10.29		3.67	1.60	75	10.81	4.11	1.42
138	9.36		2.96	1.97	100	10.18	3.59	1.64
181	8.75		2.69	2.13	150	9.17	2.87	2.03
266	7.61		1.99	2.48	200	8.51	2.59	2.20
356	6.68		0.97	2.93	250	7.85	2.18	2.40
443	6.11		0.55	-	300	7.21	1.56	2.66
530	5.22		0.44	-	400	6.38	0.70	
707	4.74		0.36	3.23	500	5.49	0.47	
895	4.18		0.56	-	600	4.98	0.40	
1088	3.66		0.72	-	700	4.76	0.36	
					800	4.48	0.45	
					1000	3.87	0.65	
103.80	CREST; March 9, 1951; 1535 GCT; 29°24'N, 119°28'W; sounding, 1950 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 37°.							
0	14.46		5.66	-	0	14.46	5.66	
8	14.48	33.20	5.52	0.56	10	14.48	5.48	0.56
20	14.48		5.31	0.60	20	14.48	5.31	0.60
44	14.46		5.46	0.56	30	14.48	5.33	0.59
63	14.52		5.51	0.59	50	14.47	5.49	0.57
84	13.95		4.80	0.70	75	14.47	5.33	0.64
117	11.23		4.55	1.14	100	12.55	4.64	0.86
148	10.05		3.77	1.65	150	10.01	3.70	(1.68)
211	9.37		2.04	-	200	9.46	2.12	(2.31)
278	7.44		2.25	2.41	250	8.52	2.24	(2.39)
341	6.76		1.52	2.77	300	7.15	2.00	2.49
405	6.24		0.97	3.05	400	6.28	1.00	3.03
529	5.52		0.48	3.22	500	5.67	0.55	3.18
678	5.08		0.30	3.34	600	5.27	0.35	3.29
862	4.29		-	-	700	5.01		
					800	4.58		

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 11, 1951; 0026 GCT; 30°20'N, 116°22'W; sounding, 600 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 34°. 107.35

0	11.97		5.85	1.04	0	11.97	5.85	1.04
9	11.94	33.47	5.68	-	10	11.92	5.64	1.13
21	11.62		5.27	1.23	20	11.62	5.28	1.22
41	11.33		4.69	1.38	30	11.46	5.00	1.29
61	10.70		3.59	1.72	50	11.11	4.25	1.58
80	10.14		3.50	1.75	75	10.25	3.52	1.74
120	9.40		3.24	1.95	100	9.75	3.39	1.82
155	9.16		2.30	2.37	150	9.17	2.49	2.32
228	9.58		1.02	-	200	9.44	1.27	(2.72)
308	8.72		0.84	2.92	250	9.44	0.96	(2.86)
384	7.88		0.73	2.98	300	8.82	0.86	(2.91)
470	6.95		0.55	3.12	400	7.70	0.69	3.00
556	6.32		0.47	3.23	500	6.72	0.52	3.16
655	5.79		0.54	3.38	600	6.07	0.49	3.30
755	5.20		0.43	-	700	5.53	0.51	

CREST; March 10, 1951; 2005 GCT; 30°10'N, 116°42'W; sounding, 1500 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 26°. 107.40

0	14.32		5.67	0.63	0	14.32	5.67	0.63
10	14.33	33.30	5.74	-	10	14.33	5.74	(0.60)
23	14.30		5.76	-	20	14.31	5.75	(0.56)
52	13.73		5.65	0.65	30	14.28	5.75	(0.56)
74	11.10		5.12	1.21	50	14.25	5.67	(0.64)
100	10.52		4.53	-	75	11.09	5.09	1.22
146	9.77		3.47	1.78	100	10.52	4.53	1.48
190	9.86		2.03	2.29	150	9.77	3.37	1.81
278	8.10		2.26	2.48	200	9.74	2.05	2.32
374	7.90		0.60	2.97	250	8.61	2.23	2.42
467	7.01		0.42	3.06	300	8.01	2.11	2.56
558	6.30		0.24	3.19	400	7.79	0.56	3.00
736	5.34		0.32	-	500	6.72	0.33	3.10
920	4.44		0.42	3.36	600	6.03	0.25	(3.21)
1116	3.81		0.67	-	700	5.51	0.30	(3.27)
					800	5.03	0.34	(3.33)
					1000	4.14	0.52	

CREST; March 10, 1951; 1404 GCT; 29°50.5'N, 117°22.5'W; sounding, 1400 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 30°. 107.50

0	15.82		5.61	0.51	0	15.82	5.61	0.51
9	15.82	33.49	5.05	0.51	10	15.82	5.05	0.51
22	15.82		5.14	0.52	20	15.82	5.12	0.52
48	15.80		5.27	0.52	30	15.81	5.21	0.52
69	15.83		5.26	0.52	50	15.81	5.27	0.52
94	13.63		5.01	0.78	75	15.82	5.22	0.54
140	10.77		2.92	-	100	12.80	4.89	0.93
187	10.18		1.93	2.31	150	10.60	2.59	1.89
280	9.44		1.02	2.78	200	10.06	1.77	2.41
378	8.28		0.62	2.97	250	9.54	1.25	2.67
471	7.38		0.41	-	300	9.03	0.91	2.83
564	6.59		0.33	-	400	8.07	0.56	
746	5.24		0.31	3.44	500	7.12	0.37	
934	4.48		0.45	3.46	600	6.31	0.32	
1128	3.88		0.63	3.40	700	5.57	0.32	
					800	4.98	0.35	3.45
					1000	4.25	0.52	3.45

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	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
107.60	CREST; March 10, 1951; 0804 GCT; 29°31.5'N, 118°02.5'W; sounding, 1950 fm; wind, 310°, force 5; weather, cloudy; sea, rough; wire angle, 24°.								
	0	15.78		5.38	0.49	0	15.78	5.38	0.49
	10	15.78	33.48	5.42	0.46	10	15.78	5.42	0.46
	24	15.79		5.39	0.46	20	15.79	5.40	0.46
	51	15.78		5.34	0.44	30	15.79	5.37	0.45
	73	15.79		5.31	0.46	50	15.78	5.34	0.44
	98	13.53		5.20	0.67	75	15.79	5.31	0.47
	144	10.80		3.62	1.43	100	13.32	5.17	0.69
	191	9.70		2.79	-	150	10.62	3.48	(1.50)
	283	8.78		1.86	2.25	200	9.56	2.68	(1.91)
	383	8.08		0.69	-	250	9.05	2.15	(2.07)
	478	7.18		0.47	3.02	300	8.65	1.71	(2.38)
	574	6.44		0.26	3.12	400	7.93	0.61	(2.90)
	767	5.14		0.36	-	500	7.00	0.42	3.04
	967	4.21		0.42	-	600	6.26	0.28	
	1167	3.57		0.77	-	700	5.61	0.33	
						800	4.94	0.36	
						1000	4.07	0.45	
107.70	CREST; March 10, 1951; 0222 GCT; 29°13'N, 118°42.5'W; sounding, 1600 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 13°.								
	0	15.56		5.39	0.57	0	15.56	5.39	0.57
	10	15.56	33.44	5.21	0.51	10	15.56	5.21	0.51
	29	15.53		5.05	0.54	20	15.55	5.09	0.52
	58	15.49		5.12	0.52	30	15.53	5.06	0.54
	88	12.37		4.55	0.91	50	15.50	5.12	0.52
	116	11.20		3.74	1.30	75	14.25	4.93	0.62
	173	10.22		2.35	2.09	100	11.80	4.21	1.09
	231	9.22		1.68	2.48	150	10.54	2.86	1.83
	345	8.18		0.66	-	200	9.74	1.99	2.31
	457	6.90		0.47	3.21	250	8.96	1.52	(2.56)
	575	5.96		0.30	3.28	300	8.49	1.07	(2.78)
	680	5.44		0.24	-	400	7.62	0.52	(3.14)
						500	6.52	0.40	3.25
						600	5.81	0.29	
107.80	CREST; March 9, 1951; 2043 GCT; 28°55'N, 119°21'W; sounding, 2050 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 25°.								
	0	15.46		5.41	0.49	0	15.46	5.41	0.49
	9	15.47	33.37	5.52	-	10	15.46	5.52	0.48
	23	15.46		5.55	0.49	20	15.46	5.55	0.49
	50	15.43		5.43	0.47	30	15.45	5.52	0.49
	72	14.82		5.57	0.49	50	15.43	5.43	0.47
	99	12.20		5.48	0.82	75	14.48	5.57	0.50
	146	9.87		4.31	1.44	100	12.15	5.45	0.84
	191	9.17		2.65	2.12	150	9.77	4.10	1.49
	282	7.57		2.33u	-	200	9.01		
	378	7.10		0.75	-	250	8.00		
	472	6.24		0.51	3.08	300	7.43		
	567	5.67		0.32	3.22	400	6.96	0.68	
	753	4.70		0.36	3.32	500	6.06	0.46	3.12
	952	4.02		0.62	3.43	600	5.50	0.32	3.23
	1149	3.46		0.79	-	700	4.96	0.34	3.28
						800	4.51	0.42	3.36
						1000	3.87	0.67	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 13, 1951; 1852 GCT; 29°47'N, 116°00.5'W; sounding, 600 fm; wind, 300°, force 1; weather, partly cloudy; sea, missing; wire angle, 11°. 110.35

0	12.74		5.83	0.72	0	12.74	5.83	0.72
10	12.34	33.40	5.67	0.69	10	12.34	5.67	0.69
25	11.96		5.39	0.87r	20	12.05	5.48	0.68
50	10.52		3.91	0.73	30	11.77	5.24	0.69
73	9.98		3.42	1.55	50	10.52	3.91	0.73
98	9.60		2.99	1.75	75	9.92	3.36	1.57
151	9.81		1.34	2.37	100	9.61	2.92	1.78
198	9.67		0.96	-	150	9.81	1.34	2.36
291	8.70		0.67	-	200	9.64	0.94	
387	7.67		0.48	-	250	9.19	0.77	
481	6.78		0.37	-	300	8.59	0.64	
578	6.20		0.25	-	400	7.53	0.46	
671	5.50		0.31	-	500	6.65	0.32	
766	5.19		0.31	3.23	600	6.04	0.26	
961	4.39		0.47	-	700	5.36	0.30	
					800	5.08	0.32	
					1000	(4.22)	(0.52)	

CREST; March 13, 1951; 2220 GCT; 29°37'N, 116°20'W; sounding, 1375 fm; wind, 280°, force 3; weather, cloudy; sea, slight; wire angle, 12°. 110.40

0	13.90		5.96	-	0	13.90	5.96	
10	13.32	33.39	5.89	-	10	13.32	5.89	
25	12.68		5.55	-	20	12.85	5.67	
49	12.40		5.49	-	30	12.61	5.51	
74	10.83		3.89	1.38	50	12.40	5.47	
97	10.34		3.50	-	75	10.82	3.84	1.39
147	9.52		2.59	1.98	100	10.29	3.45	1.67
192	9.04		1.83	2.19	150	9.49	2.52	1.99
284	8.70		0.92	-	200	8.99	1.72	(2.23)
378	7.70		0.40	2.99	250	8.81	1.19	(2.54)
470	6.58		0.31	3.05	300	8.60	0.79	(2.84)
568	5.99		0.23	-	400	7.42	0.37	3.01
759	4.95		0.38	3.24	500	6.37	0.28	(3.06)
949	4.29		0.50	3.38	600	5.81	0.25	(3.10)
1148	3.63		0.69	3.24	700	5.28	0.35	(3.19)
					800	4.77	0.40	3.28
					1000	4.13	0.55	3.37

CREST; March 14, 1951; 0352 GCT; 29°16'N, 116°59.5'W; sounding, 1950 fm; wind, 310°, force 3; weather, cloudy; sea, slight; wire angle, 11°. 110.50

0	15.48		5.57	-	0	15.48	5.57	
10	15.28	33.39	5.55	0.42	10	15.28	5.55	0.42
26	15.26		5.61	0.47	20	15.26	5.59	0.45
50	15.22		5.59	0.42	30	15.25	5.60	0.47
75	14.80		5.57	-	50	15.22	5.59	0.42
98	12.32		5.01	0.88	75	14.80	5.57	0.57
149	10.06		3.40	1.70	100	12.13	4.95	0.90
194	9.37		2.48	2.27	150	10.06	3.35	1.72
284	8.42		2.62u	-	200	9.28		(2.30)
379	7.24		1.09	-	250	8.74		
472	6.59		0.60	2.95	300	8.24		
570	6.12		0.34	3.07	400	7.04	0.91	
664p	5.62		0.34	3.14	500	6.44	0.50	
965p	4.28		0.48	-	600	5.96	0.33	
					700	5.43	0.35	
					800	4.92	0.37	
					1000	(4.17)	(0.50)	

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
110.60	CREST; March 14, 1951; 0854, 1028 GCT; 28°55'N, 117°38.5'W; sounding, 2000 fm; wind, force 3; weather, cloudy; sea, slight; wire angle, 05°, 00°.							
0	15.73		5.22	-	0	15.73	5.22	
10	15.78	33.47	5.36	0.38	10	15.78	5.36	0.38
25	15.69		5.08	-	20	15.72	5.08	(0.40)
50	15.67		5.03	-	30	15.66	5.04	(0.41)
75	14.22		5.22	0.47	50	15.67	5.03	(0.44)
100	12.23		3.95	-	75	14.22	5.22	0.47
153	10.91		2.65	-	100	12.23	3.95	
201	10.38		1.77	-	150	10.93	2.72	
297	9.24		1.05	-	200	10.39	1.79	
398	8.20		0.55	-	250	9.82	1.34	
494	7.02		0.36	3.01	300	9.18	1.03	
594	6.06		0.28	3.11	400	8.16	0.53	
790	4.98		0.32	-	500	6.96	0.34	
981	4.19		0.50	-	600	6.01	0.28	
1180	3.57		0.67	-	700	5.42	0.27	
					800	4.92	0.31	
594a)	6.08		0.31	-	1000	4.11	0.50	
988	4.14		0.45	-	1200	3.54	0.69	
1183	3.60		0.70	-	1500	2.96	1.03	
1380p	3.30		0.84	-	2000	2.18	1.53	
1480	3.02		1.00	-	2500	1.79	2.32	
1723	2.54		1.38	-	3000	1.59	2.53	
2220	1.96		1.65	-				
2489	1.80		2.32	-				
2751	1.68		2.54	-				
3048	1.59		2.51	-				
110.70	CREST; March 14, 1951; 1746 GCT; 28°35'N, 118°18'W; sounding, 2200 fm; wind, 150°, force 1; weather, cloudy; sea, moderate; wire angle, 03°.							
0	15.78		5.58	-	0	15.78	5.58	
11	15.60	33.40	5.40	0.45	10	15.59	5.42	0.45
25	15.56		5.48	0.44	20	15.56	5.43	0.44
49	14.92		5.49	0.39	30	15.53	5.48	0.43
107p	11.10		3.38	1.60	50	14.90	5.49	(0.39)
178p	9.72		0.40r	-	75	13.20	5.28	
278	9.38		0.73	-	100	11.30	4.18	
374	8.06		0.53	2.67	150	10.09	2.31	
464	7.07		0.31	2.87	200	9.61	1.56	
562	6.16		0.32	2.98	250	9.47	0.93	
752	5.02		0.73r	-	300	9.17	0.65	
943	4.28		0.52	3.06	400	7.73	0.46	2.73
1143	3.65		0.70	2.98	500	6.72	0.31	2.93
					600	5.88	0.31	(2.98)
					700	5.31	0.34	(2.98)
					800	4.82	0.40	(2.99)
					1000	4.07	0.57	3.05

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 14, 1951; 2244 GCT;[a] 28°16'N, 118°57.5'W; sounding, 2200 fm; wind, 150°, force 2; weather, cloudy; sea, moderate; wire angle, 07°. 110.80

693	5.08							
717	5.02							
741	4.91							
764	4.82							
789	4.76							
813	4.62							
838	4.51							
862	4.47							
886	4.40							
911	4.31							
936	4.20							
960	4.09							
985	4.00							
1011	3.87							

CREST; March 15, 1951; 0004 GCT; 28°16'N, 118°57.5'W; sounding, 2200 fm; wind, 150°, force 2; weather, cloudy; sea, moderate; wire angle, 04°. 110.80

0	17.04		5.31	0.41	0	17.04	5.31	0.41
10	16.12	33.52	5.13	0.40	10	16.12	5.13	0.40
25	16.22		5.10	0.40	20	16.19	5.10	0.40
50	15.40		5.32	0.42	30	16.21	5.13	0.41
75	15.56		5.49	0.38	50	15.40	5.32	0.42
100	12.12		5.01	-	75	15.56	5.49	0.38
152	10.29		3.25	1.63	100	12.12	5.01	0.90
201	9.24		2.48	2.09	150	10.33	3.28	1.61
294	8.31		1.37	-	200	9.27	2.51	2.08
393	7.16		0.81	2.85	250	8.68	1.90	2.47
488	6.48		0.53	2.91	300	8.26	1.34	2.71
588	5.62		0.30	-	400	7.08	0.77	2.86
781	4.76		0.39	3.18	500	6.38	0.50	(2.93)
974	4.06		0.62	-	600	5.55	0.30	(3.09)
1173	3.54		0.79	3.16	700	5.08	0.34	(3.16)
					800	4.69	0.41	3.17
					1000	3.97	0.65	(3.10)

CREST; March 15, 1951; 0514 GCT; 27°56'N, 119°37.5'W; sounding, 2250 fm; wind, calm; weather, clear; sea, moderate; wire angle, 00°. 110.90

0	16.22		5.50	0.49	0	16.22	5.50	0.49
10	15.84	33.35	5.53	0.46	10	15.84	5.53	0.46
24	15.80		5.53	0.50	20	15.80	5.53	0.49
50	15.80		5.56	-	30	15.79	5.54	0.50
75	15.60		5.58	0.50	50	15.80	5.56	0.50
100	13.63		5.71	-	75	15.60	5.58	0.50
153	10.10		4.12	1.48	100	13.63	5.71	0.65
200	8.88		3.66	-	150	10.19	4.17	1.38
295	7.70		1.65	-	200	8.88	3.66	(1.99)
394	6.98		0.73	2.87	250	8.17	2.62	(2.30)
489	6.40		0.37	-	300	7.65	1.59	(2.56)
535p	6.12		0.31	3.11	400	6.94	0.68	(2.89)
784	4.70		0.42	-	500	6.34	0.36	
976	4.04		0.59	3.22	600	5.75	0.31	
1178	3.45		0.82	-	700	5.18	0.36	
					800	4.63	0.44	
					1000	3.96	0.61	

a) Test cast.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
110.100	CREST; March 15, 1951; 1035 GCT; 27°36.5'N, 120°17.5'W; sounding, 2250 fm; wind, 200°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°.							
0	16.87		5.23	0.43	0	16.87	5.23	0.43
10	16.68	33.53	5.34	0.41	10	16.68	5.34	0.41
25	16.62		5.42	0.44	20	16.62	5.40	0.43
50	16.66		5.42	0.39	30	16.62	5.42	0.44
75	16.68		5.43	0.43	50	16.66	5.42	0.39
99	13.84		5.61	-	75	16.68	5.43	0.43
153	10.14		4.01	1.35	100	13.70	5.62	0.58
201	8.82		3.65	1.74	150	10.22	4.08	1.31
296	7.73		1.88	2.51	200	8.84	3.66	1.73
395	6.62		0.66	-	250	8.19	3.01	2.18
491	6.10		0.48	3.12	300	7.66	1.82	2.54
591	5.66		0.50	3.15	400	6.59	0.64	2.97
787	4.68		0.42	3.18	500	6.06	0.48	3.12
980	4.02		0.70	-	600	5.62	0.50	3.15
1182	3.50		0.88	3.19	700	5.14	0.42	3.17
					800	4.61	0.43	3.18
					1000	3.95	0.72	(3.19)
110.110	CREST; March 15, 1951; 1526, 1719 GCT; 27°17'N, 120°58'W; sounding, 2180 fm; wind, calm; weather, cloudy; sea, rough; wire angle, 04°, 08°.							
0	16.20		5.48	0.42	0	16.20	5.48	0.42
10	16.16	33.35	5.41	0.42	10	16.16	5.41	0.42
25	16.08		5.52	0.45	20	16.11	5.51	0.44
50	15.68		5.59	0.41	30	16.02	5.54	0.45
75	14.34		6.02	0.46	50	15.68	5.59	0.41
100	12.70		5.18	-	75	14.34	6.02	0.46
154	10.03		4.63	1.63	100	12.70	5.18	0.85
202	8.98		2.89	1.99	150	10.21	4.66	1.58
296	7.14		2.09	2.45	200	9.00	2.94	1.97
396	6.32		0.99	2.92	250	7.98	2.42	2.23
493	6.14		0.38	3.09	300	7.11	2.06	2.47
593	5.40		0.38	3.23	400	6.29	0.94	2.93
788	4.58		0.40	3.23	500	6.11	0.38	3.10
979	3.90		0.70	3.12u	600	5.36	0.38	3.24
1181	3.38		0.88	3.20	700	4.92	0.39	3.23
					800	4.54	0.41	3.23
597a)	5.44		0.30	3.20	1000	3.85	0.70	3.24
989	3.89		0.68	3.24	1200	3.37	0.89	3.15
1183	3.40		0.85	3.16	1500	2.77	1.24	3.03
1480	2.79		1.21	3.04	2000	2.09	1.97	2.88
1723	2.36		1.61	-	2500	1.79	2.37	2.79
1971	2.12		1.95	2.89	3000	1.60	2.68	2.67
2218	1.94		2.14	2.81				
2466	1.81		2.35	-				
2725	1.71		2.55	2.71				
3019	1.59		2.69	2.67				

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; March 13, 1951; 1255 GCT; 29°10'N, 115°39'W; sounding, 900 fm; wind, 070°, force 4; weather, partly cloudy; sea, rough; wire angle, 15°.								113.35
0	14.25		5.46	-	0	14.25	5.46	
10	14.31	33.35	5.50	0.39	10	14.31	5.50	0.39
24	14.30		5.47	0.41	20	14.31	5.47	0.41
48	13.91		5.25	0.41	30	14.27	5.41	0.41
72	13.12		5.15	-	50	13.78	5.24	(0.42)
95	10.92		3.76	-	75	12.98	5.10	(0.62)
146	9.35		2.45	1.87	100	10.64	3.52	(1.36)
192	9.06		2.04	2.15	150	9.31	2.41	1.90
284	8.92		0.56	2.74	200	9.02	1.94	2.20
381	7.84		0.47	2.86	250	8.94	1.14	2.54
472	7.07		0.35	2.95	300	8.84	0.53	2.77
569	6.26		0.24	3.07	400	7.64	0.44	2.87
756	5.12		0.24	-	500	6.84	0.32	2.98
943	4.40		0.43	3.24	600	6.04	0.24	(3.08)
1141	3.84		0.63	3.15	700	5.42	0.24	(3.14)
					800	4.92	0.28	(3.18)
					1000	4.22	0.49	3.22
CREST; March 13, 1951; 0852 GCT; 29°00'N, 115°59'W; sounding, 400 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 06°.								113.40
0	14.30		5.63	0.41	0	14.30	5.63	0.41
10	14.30	33.35	5.68	0.38	10	14.30	5.68	0.38
25	13.92		5.68	-	20	14.12	5.67	0.38
50	13.35		5.71	0.48	30	13.79	5.66	0.39
74	12.08		4.76	0.87	50	13.35	5.71	0.48
98	10.42		4.23	-	75	11.99	4.72	0.88
150	9.58		3.11	1.76	100	10.37	4.17	1.28
197	9.04		2.30	1.99	150	9.58	3.11	1.76
244	8.78		1.71	-	200	9.02	2.26	(2.00)
290	8.28		1.06	-	250	8.76	1.60	(2.08)
342	7.63		0.83	2.56	300	8.12	1.00	(2.40)
389	7.30		0.67	2.73	400	7.22	0.63	2.76
483	6.54		0.40	2.87	500	6.45	0.37	2.88
583	6.18		0.26	2.93	600	6.09	0.26	2.94
681	5.40		0.28	3.04				
CREST; March 13, 1951; 0309 GCT; 28°40.5'N, 116°38.5'W; sounding, 1950 fm; wind, 060°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°.								113.50
0	15.51		4.96	-	0	15.51	4.96	
10	15.27	33.38	4.78	0.49	10	15.27	4.78	0.49
25	15.21		5.09	0.49	20	15.22	4.98	0.49
48	15.08		5.21	0.51	30	15.18	5.13	0.49
73	13.60		5.11	0.70	50	15.08	5.21	0.52
97	12.05		4.65	1.08	75	13.33	5.07	0.72
151	10.32		3.42	1.71	100	11.94	4.58	1.12
197	9.04		2.67	2.11	150	10.37	3.42	1.70
289	8.58		1.52	-	200	9.02	2.61	(2.12)
387	7.72		0.66	2.93	250	8.74	1.96	(2.43)
481	7.20		0.34	3.12	300	8.51	1.37	(2.66)
579	6.12		0.59u	3.23	400	7.63	0.59	2.96
771	5.08		0.42	3.31	500	7.03	(0.34)	3.14
959	4.40		0.32	3.34	600	5.96	(0.37)	3.24
1161	3.58		0.73	3.33	700	5.42	(0.40)	3.29
					800	4.95	0.38	3.32
					1000	4.24	0.36	3.34

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
113.60	CREST; March 12, 1951; 2123 GCT; 28°21.5'N, 117°18'W; sounding, 2000 fm; wind, 240°, force 2; weather, cloudy; sea, moderate; wire angle, 01°.							
0	15.95		-	-	0	15.95		
10	15.56	33.68	5.53	0.60	10	15.56	5.53	0.60
25	15.58		5.43	0.66	20	15.57	5.45	0.65
50	15.54		5.48	0.61	30	15.57	5.43	0.66
75	14.70		4.16	0.83	50	15.54	5.48	0.61
99	12.44		3.58	1.64	75	14.70	4.16	0.83
153	10.72		2.08	2.40	100	12.44	3.54	1.65
202	10.66		1.16	-	150	10.72	2.13	2.38
297	8.94		1.11	2.85	200	10.66	1.17	2.69
398	8.00		0.63	3.02	250	9.88	1.14	2.80
493	6.95		0.40	3.20	300	8.89	1.09	2.86
593	6.26		0.25	3.31	400	7.98	0.62	3.02
790	5.05		0.34	3.34	500	6.89	0.38	3.21
982	4.26		0.56	-	600	6.22	0.25	3.32
1183	3.62		0.72	-	700	5.61	0.29	3.32
					800	4.99	0.35	
					1000	4.20	0.58	
113.70	CREST; March 12, 1951; 1526 GCT; 28°02'N, 117°57.5'W; sounding, 2000 fm; wind, 040°, force 4; weather, partly cloudy; sea, moderate; wire angle, 14°.							
0	15.00		5.16	0.55	0	15.00	5.16	0.55
10	15.03	33.56	5.21	-	10	15.03	5.21	0.51
24	14.94		5.37	0.57	20	14.98	5.34	0.54
53	12.71		3.86	-	30	14.70	5.34	(0.66)
78	11.50		3.39	1.63	50	12.92	4.06	(1.12)
106	10.29		3.04	-	75	11.63	3.44	(1.58)
157	10.36		1.51	-	100	10.33	3.11	(2.06)
208	10.10		0.73	2.84	150	10.35	1.73	(2.60)
309	8.72		0.52	-	200	10.15	0.77	(2.82)
416	7.33		0.50	3.13	250	9.67	0.59	(2.92)
520	6.44		0.33	-	300	8.89	0.53	(2.99)
822p	4.77		0.49	3.39	400	7.52	0.50	(3.12)
1042p	3.93		0.63	3.35	500	6.60	0.34	(3.20)
					600	(5.91)	(0.35)	(3.28)
					700	(5.36)	(0.42)	(3.34)
					800p	(4.88)	(0.49)	(3.38)
					1000p	4.08	0.60	3.36
117.35	CREST; March 11, 1951; 1247 GCT; 28°38'N, 115°16'W; sounding, 96 fm; wind, 320°, force 5; weather, partly cloudy; sea, moderate; wire angle, 17°.							
0	13.04		5.43	0.79	0	13.04	5.43	0.79
10	13.00	33.36	5.34	-	10	13.00	5.34	0.79
24	12.78		5.31	0.81	20	12.86	5.32	0.81
45	12.44		5.18	-	30	12.62	5.28	0.82
69	10.63		5.04	1.40	50	12.07	5.16	1.00
91	10.50		3.48	1.72	75	10.57	4.82	1.48
141	10.07		1.72	2.32	100	10.44	3.11	1.85

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 11, 1951; 1600 GCT; 28°27.5'N, 115°35'W; sounding, 520 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°. 117.40

0	14.32		5.62	0.63	0	14.32	5.62	0.63
10	14.34	33.33	5.74	0.65	10	14.34	5.74	0.65
25	14.31		5.57	0.68	20	14.32	5.64	0.67
50	12.29		5.13	-	30	14.27	5.49	0.70
75	11.02		4.15	1.56	50	12.29	5.13	1.01
101	10.17		2.77	2.05	75	11.02	4.15	1.56
156	10.28		1.11	2.64	100	10.18	2.82	2.03
204	9.72		0.66	2.95	150	10.27	1.21	2.59
251	9.38		0.48	2.98	200	9.78	0.69	2.94
300	8.98		0.50	3.00	250	9.39	0.48	2.98
353	8.76		0.43	-	300	8.98	0.50	3.00
402	8.54		0.44	3.06	400	8.56	0.44	3.06
500	7.38		0.34	-	500	7.38	0.34	
590	6.32		0.24	-	600	6.23	0.24	
705	5.50		0.28	-	700	5.53	0.28	

CREST; March 11, 1951; 2142 GCT; 28°08'N, 116°15'W; sounding, 2100 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 29°. 117.50

0	14.91		5.55	0	14.91	5.55	
8	14.90	33.33	5.46	10	14.89	5.46	
26	14.74		5.49	20	14.81	5.47	
52	13.80		5.58	30	14.66	5.50	
78	11.42		4.71	50	13.88	5.58	
105	10.80		3.32	75	11.70	4.87	
157	10.43		1.76	100	10.91	3.54	
208	10.34		0.78	150	10.49	1.93	
312	9.04		0.61	200	10.35	0.86	
412	7.74		0.45	250	10.14	0.69	
517	6.70		0.37	300	9.26	0.62	
616	5.87		0.28	400	7.88	0.47	
828	4.82		0.35	500	6.86	0.37	
1034	4.06		0.57	600	6.00	0.30	
1242	3.50		0.75	700	5.41	0.30	
				800	4.94	0.34	
				1000	4.17	0.54	

CREST; March 12, 1951; 0330 GCT; 27°48'N, 116°55'W; sounding, 2100 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 02°. 117.60

0	15.12		5.46	0.59	0	15.12	5.46	0.59
10	15.14	33.40	5.25	0.57	10	15.14	5.25	0.57
25	15.24		5.38	0.57	20	15.19	5.31	0.57
54	15.52		5.33	0.63	30	15.29	5.37	0.58
79	15.46		5.32	0.60	50	15.50	5.34	0.63
109	13.43		3.04	1.67	75	15.47	5.32	0.60
162	11.63		0.94r	2.26	100	14.28	3.38	1.36
216	10.54		1.89	2.63	150	11.97	2.47	2.16
321	9.55		0.89	3.00	200	10.85	2.03	2.53
429	7.95		0.31	3.12	250	10.16	1.57	2.80
534	6.64		0.26	3.23	300	9.74	1.07	2.96
638	5.82		0.27	3.29	400	8.36	0.40	3.09
848	4.82		0.38	3.40	500	7.06	0.27	3.20
1066	3.94		0.55	-	600	6.06	0.27	3.27
1273	3.41		0.80	3.32	700	5.45	0.29	3.33
					800	5.00	0.35	3.38
					1000	4.19	0.50	(3.37)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
117.70	CREST; March 12, 1951; 0909 GCT; 27°28'N, 117°34.5'W; sounding, 1950 fm; wind, 360°, force 4; weather, partly cloudy; sea, rough; wire angle, 14°.							
0	15.21		5.63	-	0	15.21	5.63	
10	15.26	33.46	5.57	0.59	10	15.26	5.57	0.59
24	15.15		5.61	0.60	20	15.20	5.60	0.59
54	12.59		4.99	1.13	30	14.96	5.60	0.64
78	11.10		4.10	-	50	13.25	5.20	1.05
105	10.62		2.65	2.07	75	11.29	4.24	1.51
156	10.50		1.53	2.49	100	10.67	2.92	1.99
206	9.70		1.49	-	150	10.51	1.57	2.46
307	8.62		0.75	-	200	9.86	1.50	
413	7.55		0.36	3.18	250	9.14	1.19	
513	6.42		0.32	3.29	300	8.67	0.79	(2.99)
614	5.80		0.26	3.31	400	7.68	0.37	(3.16)
812	4.82		0.34	3.37	500	6.58	0.33	3.28
1015	3.96		0.58	-	600	5.87	0.26	3.31
1212	3.43		0.83	3.24	700	5.38	0.27	3.34
					800	4.88	0.33	3.36
					1000	4.01	0.56	(3.30)
120.35	CREST; March 18, 1951; 1040 GCT; 28°03'N, 114°54'W; sounding, 46 fm; wind, 360°, force 4; weather, partly cloudy; sea, slight; wire angle, 04°.							
0	13.84		5.59	0.64	0	13.84	5.59	0.64
10	13.86	33.42	5.77	0.59	10	13.86	5.77	0.59
25	12.61		4.96	1.10	20	13.13	5.30	0.76
50	11.70		3.63	1.58	30	12.40	4.71	1.20
75	11.10		2.13	2.20	50	11.70	3.63	1.58
					75	11.10	2.13	2.20
120.45	CREST; March 18, 1951; 0530 GCT; 27°41.5'N, 115°33'W; sounding, 1280 fm; wind, 330°, force 4; weather, partly cloudy; sea, moderate; wire angle, 26°.							
0	14.90		5.94	0.54	0	14.90	5.94	0.54
9	14.94	33.58	5.94	0.57	10	14.94	5.93	0.57
22	14.47		5.61	0.66	20	14.55	5.73	0.64
49	11.99		3.69	1.54	30	13.29	4.73	0.74
70	11.26		2.66u	1.99	50	11.96	3.60	1.58
95	10.31		2.76	-	75	11.06	3.11	2.02
142	10.06		1.86	2.49	100	10.15	2.68	2.18
187	10.25		0.86	-	150	10.10	1.68	
278	9.54		0.37	-	200	10.18	0.75	
375	8.38		0.28	-	250	9.81	0.47	
468	7.17		0.33	3.13	300	9.30	0.33	
562	6.45		0.21	3.23	400	8.03	0.29	
748	5.22		0.30	3.31	500	6.88	0.29	3.17
944	4.46		0.41	-	600	6.16	0.23	3.24
1145	3.75		0.63	3.36	700	5.51	0.28	3.29
					800	4.97	0.31	3.35
					1000	4.26	0.46	3.43

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 18, 1951; 0046 GCT; 27°31'N, 115°52.5'W; sounding, 2150 fm; wind, 050°, force 4; weather, cloudy; sea, rough; wire angle, 09°. 120.50

0	16.06		4.62	0.55	0	16.06	4.62	0.55
10	15.92	33.75	5.31	0.57	10	15.92	5.31	0.57
25	15.69		5.28	0.63	20	15.78	5.30	0.61
50	13.52		4.72	1.02	30	15.62	5.21	0.66
75	11.48		3.72	1.53	50	13.52	4.72	1.02
99	10.42		3.18	1.77	75	11.48	3.72	1.53
152	10.04		1.62	2.44	100	10.45	3.14	1.78
199	9.64		1.04	2.69	150	10.06	1.66	2.42
293	8.86		0.49	-	200	9.63	1.04	2.69
393	7.92		0.30	3.01	250	9.21	0.68	(2.82)
486	7.03		0.30	3.16	300	8.80	0.47	(2.90)
580	6.16		0.24	3.21	400	7.85	0.31	3.02
782	5.02		0.40	3.35	500	6.88	0.31	3.17
977	4.26		0.56	3.33	600	6.00	0.24	3.23
1179	3.52		0.77	3.24	700	5.42	0.31	3.31
					800	4.94	0.42	3.35
					1000	4.17	0.58	3.32

CREST; March 17, 1951; 1520, 1745, 1849 GCT; 27°11.5'N, 116°32'W; sounding, 2050 fm; wind, 270°, force 4; weather, cloudy; sea, rough; wire angle, 33°, 30°, 33°. 120.60

0	15.74		5.45	0.51	0	15.74	5.45	0.51
8	15.76	33.52	5.45	0.50	10	15.75	5.44	0.50
21	15.64		5.24	0.51	20	15.66	5.25	0.51
46	15.18		5.43	0.49	30	15.51	5.33	0.50
67	15.18		5.01	0.55	50	15.08	5.37	0.49
92	12.28		3.01	-	75	13.72	4.50	
135	10.50		3.03	-	100	11.86	3.01	
177	10.20		1.51	-	150	10.33	2.88	
261	9.24		1.55u	-	200	10.03		
349	7.78		0.66	3.01	250	9.39		
434	7.26		0.34	3.06	300	8.57		
685	5.16		0.31	-	400	7.44	0.44	3.05
870	4.42		0.47	3.23	500	6.69	0.30	(3.07)
1071	3.77		0.63	3.24	600	5.76	0.30	(3.11)
					700	5.07	0.31	(3.17)
566a)	6.04		0.30	-	800	4.66	0.38	3.21
942	4.20		0.55	-	1000	3.99	0.62	3.22
1133	3.65		0.72	-	1200	3.52	0.78	
1420	3.00		0.98	-	1500	2.85	1.08	
1664	2.58		1.36	-	2000	2.15	1.82	
					2500	1.79	2.31	
1888	2.28		1.66	-	3000	1.60	2.47	
2144	2.02		2.02	-				
2405	1.85		2.25	-				
2694	1.72		2.40	-				
3040	1.59		2.47	-				

a) Overlapping casts; reconciliation of property curves when necessary.

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S10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
120.70	CREST; March 17, 1951; 0914 GCT; 26°52'N, 117°10'W; sounding, 2150 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 17°.							
0	16.68		5.56	0.54	0	16.68	5.56	0.54
10	16.68	33.60	5.40	-	10	16.68	5.40	0.46
24	16.66		5.41	0.50	20	16.67	5.41	0.49
53	16.20		5.41	0.52	30	16.64	5.41	0.51
76	15.87		5.50	0.50	50	16.26	5.40	0.52
104	13.16		4.76	0.99	75	15.92	5.49	0.50
153	10.25		3.06	-	100	13.92	4.91	0.86
201	9.43		1.97	2.35	150	10.39	3.14	1.91
298	8.74		0.86	2.85	200	9.44	1.98	2.34
399	7.72		0.41	2.97	250	9.06	1.33	2.64
496	6.53		0.35	3.13	300	8.72	0.84	2.85
593	5.82		0.32	-	400	7.72	0.40	2.97
785	4.78		0.38	3.35	500	6.48	0.35	(3.13)
985	3.98		0.58	3.32	600	5.79	0.32	(3.28)
1182	3.48		0.77	3.26	700	5.28	0.34	(3.34)
					800	4.69	0.40	3.35
					1000	3.93	0.59	3.32
120.80	CREST; March 17, 1951; 0340 GCT; 26°32.5'N, 117°48.5'W; sounding, 2100 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 26°.							
0	17.40		5.11	0.50	0	17.40	5.11	0.50
9	17.40	33.69	5.33	0.46	10	17.39	5.32	0.46
23	17.22		5.36	0.48	20	17.25	5.35	0.48
50	17.06		5.37	0.47	30	17.15	5.36	0.48
					50	17.06	5.37	0.47
120.90	CREST; March 16, 1951; 2016 GCT; 26°13'N, 118°27.5'W; sounding, 2250 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 15°.							
0	17.51		5.37	-	0	17.51	5.37	
10	17.27	33.67	5.38	-	10	17.27	5.38	
24	17.24		5.38	0.54	20	17.25	5.37	
53	17.18		5.38	-	30	17.22	5.38	(0.53)
77	16.52		5.41	0.52	50	17.20	5.38	(0.47)
106	14.24		4.75	0.67	75	16.60	5.40	(0.51)
158	10.78		2.92	1.79	100	14.75	4.95	0.64
209	9.53		2.16	2.19	150	11.05	3.11	1.61
310	7.84		1.24	-	200	9.72	2.27	2.13
418	6.88		0.74	3.00	250	8.78	1.77	(2.40)
521	6.14		0.49	-	300	7.99	1.32	(2.61)
623	5.43		0.35	3.20	400	7.03	0.80	(2.95)
823	4.58		0.46	3.27	500	6.28	0.53	3.06
1020	3.86		0.81	-	600	5.57	0.37	3.17
1229	3.33		0.95	3.23	700	5.02	0.36	3.24
					800	4.65	0.44	3.27
					1000	3.93	0.76	3.22

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; March 16, 1951; 1208, 1405 GCT; 25°53.5'N, 119°07'W; sounding, 2300 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 04°, 05°. 120.100

0	17.02			-	0	17.02		
10	17.00	33.69		0.43a)	10	17.00		0.43
25	16.91			0.50	20	16.94		0.47
55	16.79			0.40	30	16.88		0.50
80	14.72			0.51	50	16.80		0.41
110	11.66			-	75	15.20		0.45
164	9.76			1.70	100	12.34		0.94
217	8.67			2.14	150	10.19		1.55
321	7.42			-	200	9.00		2.00
429	6.74			3.04	250	8.21		(2.35)
534	5.82			3.13	300	7.64		(2.58)
638	5.14			-	400	6.90		(2.96)
842	4.34			3.22	500	6.14		3.10
1048	3.68			3.19	600	5.38		(3.25)
1250	3.15			3.16	700	4.88		(3.29)
					800	4.49		(3.24)
642b)	5.18			3.34	1000	3.81		3.20
1066	3.64			3.29	1200	3.27		3.16
1277	3.14			-	1500	2.71		3.10
1598	2.54			-	2000	2.06		3.01
1863	2.19			2.99	2500	1.79		3.13
2395	1.84			3.15	3000	1.63		(2.90)
2662	1.72			3.08				
2951	1.64			-				
3306	1.54			2.92				

CREST; March 16, 1951; 0714 GCT; 25°33'N, 119°44'W; sounding, 2200 fm; wind, 320°, force 1; weather, clear; sea, moderate; wire angle, 20°. 120.110

0	17.21		-	0.53	0	17.21	(4.69)	0.53
9	16.94	33.66	4.69	0.48	10	16.94	4.69	(0.48)
23	16.90		4.80	-	20	16.90	4.78	(0.51)
47	16.80		5.05	0.53	30	16.88	4.89	(0.52)
70	16.46		5.02	-	50	16.77	5.05	(0.53)
92p	12.80		4.68	-	75	16.37	4.97	
172p	10.30		4.13	1.39	100	12.50	4.63	
273	8.08		2.15	-	150	10.89	4.31	
363	7.70		0.58	-	200	9.79	3.59	
450	6.86		0.32	3.07	250	9.09	2.60	
542	6.11		0.25	-	300	8.43	1.56	
723	5.04		0.34	-	400	7.32	0.43	
908	4.34		0.48	3.25	500	6.44	0.27	
1106	3.72		0.63	-	600	5.73	0.26	
					700	5.17	0.32	
					800	4.72	0.39	
					1000	4.04	0.54	

a) No chemical analyses of samples until eight hours after collection, two hours past time limit.

b) Overlapping casts; reconciliation of property curves when necessary.

S10

CCOFI 5103

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
123.40	CREST; March 18, 1951; 1640 GCT; 27°18'N, 114°53'W; sounding, 300 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 08°.							
0	16.10		5.52	-	0	16.10	5.52	
10	16.10	33.66	5.37	-	10	16.10	5.37	
25	15.96		5.50	0.57	20	16.02	5.47	
50	12.74		4.15	1.29	30	15.37	5.46	0.59
73	11.43		3.43	1.71	50	12.74	4.15	1.29
97	9.94		3.94u	1.70	75	11.34	(3.37)	1.72
151	10.18		1.62	-	100	9.95	(2.76)	(1.73)
197	10.34		0.92	2.73	150	10.17	(1.64)	(2.42)
243	10.32		0.40	2.85	200	10.35	0.89	2.74
290	9.86		0.38	-	250	10.29	0.38	2.86
343	9.34		0.30	2.97	300	9.74	0.37	2.96
390	8.44		0.27	2.96	400	8.29	0.27	2.97
439	7.89		0.26	3.10	500	(7.24)	(0.23)	(3.16)
489	7.35		0.23	3.16				
123.50	CREST; March 18, 1951; 2210 GCT; 26°58'N, 115°30.5'W; sounding, 1750 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 04°.							
0	16.58		5.10	0.54	0	16.58	5.10	0.54
10	16.30	33.57	5.25	0.52	10	16.30	5.25	0.52
25	15.74		5.29	0.53	20	16.14	5.28	0.52
50	14.03		5.22	0.73	30	15.25	5.28	0.54
75	11.76		4.47	1.17	50	14.03	5.22	0.73
100	10.92		3.26	1.73	75	11.76	4.47	1.17
153	9.56		2.32	-	100	10.92	3.26	1.73
201	8.42		2.19	2.33	150	9.62	2.33	2.15
295	9.20		0.29	-	200	8.42	2.19	2.32
395	8.06		0.26	3.17	250	8.85	0.88	(2.73)
490	6.92		0.24	3.18	300	9.19	0.29	(3.06)
590	6.10		0.26	3.27	400	7.99	0.25	3.17
786	5.07		0.31	-	500	6.82	0.24	3.18
978	4.14		0.51	3.35	600	6.03	0.25	(3.27)
1180	3.51		0.72	3.32	700	5.48	0.27	(3.28)
					800	5.00	0.32	(3.30)
					1000	4.05	0.54	3.35
123.60	CREST; March 19, 1951; 0221 GCT; 26°38.5'N, 116°09'W; sounding, 2050 fm; wind, 020°, force 4; weather, partly cloudy; sea, rough; wire angle, 26°.							
0	16.46		5.03	-	0	16.46	5.03	
9	16.48	33.60	4.84	0.48	10	16.46	4.76	0.48
22	16.24		4.43	0.50	20	16.29	4.44	0.50
49	15.18		5.21	0.50	30	15.87	4.68	0.50
71	13.44		5.10	0.76	50	15.17	5.21	0.50
97	11.55		3.81	-	75	12.93	4.99	0.84
142	10.25		2.73	1.92	100	11.42	3.64	1.36
186	9.72		2.09	-	150	10.13	2.62	(2.02)
274	8.69		1.08	2.77	200	9.57	1.84	(2.45)
366	7.28		0.75	2.96	250	8.97	1.19	(2.69)
454	6.72		0.37	3.17	300	8.30	1.01	2.83
543	5.90		0.35	3.22	400	7.03	0.56	3.03
721	5.05		0.30	3.26	500	6.35	0.36	3.20
907	4.26		0.53	3.28	600	5.56	0.33	3.24
1100	3.70		0.64	3.03u	700	5.14	0.30	3.26
					800	4.73	0.37	3.27
					1000	3.95	0.61	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

127.40 CREST; March 19, 1951; 1844 GCT; 26°45'N, 114°29'W; sounding, 1650 fm; wind, 040°, force 4; weather, clear; sea, rough; wire angle, 07°.

0	16.48		5.43	0.47	0	16.48	5.43	0.47
10	16.40	33.70	5.52	0.49	10	16.40	5.52	0.49
25	16.34		5.49	0.50	20	16.36	5.51	0.50
50	15.80		5.49	0.53	30	16.27	5.49	0.50
74	13.28		4.11	1.27	50	15.80	5.49	0.53
99	11.52		3.08	1.75	75	13.25	4.07	1.29
152	10.27		2.30	2.17	100	11.46	3.06	1.77
200	8.80		2.48	2.24	150	10.31	2.31	2.16
294	9.10		0.48	2.95	200	8.80	2.48	2.24
392	7.98		0.33	3.06	250	9.03	1.02	2.67
485	7.02		0.21	3.13	300	9.08	0.45	2.96
584	6.28		0.33	3.21	400	7.88	0.31	3.06
776	5.12		0.47	3.26	500	6.91	0.21	3.14
965	4.32		0.46	-	600	6.17	0.34	3.22
1165	3.69		0.66	3.38	700	5.56	0.42	3.24
					800	5.00	0.46	(3.26)
					1000	4.19	0.48	(3.33)

127.50 CREST; March 19, 1951; 1404 GCT; 26°24'N, 115°07'W; sounding, 2040 fm; wind, 040°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.

0	16.22		5.52	-	0	16.22	5.52	
10	16.24	33.66	5.52	0.63	10	16.24	5.52	0.63
25	16.20		5.56	0.64	20	16.22	5.54	0.63
50	15.26		5.56	0.66	30	16.15	5.56	0.65
74	12.36		4.97	1.17	50	15.26	5.56	0.66
98	11.68		3.26	-	75	12.35	4.88	(1.24)
153	9.51		3.27	1.89	100	11.50	3.26	(1.88)
201	9.17		1.88	2.35	150	9.59	3.27	(1.89)
296	9.31		0.35	-	200	9.17	1.92	2.33
395	7.84		0.27	3.02	250	9.21	0.76	2.57
490	6.82		0.24	3.08	300	9.31	0.34	2.75
588	6.02		0.22	3.05	400	7.75	0.27	3.03
783	5.16		0.35	-	500	6.74	0.24	3.07
974	4.31		0.48	3.21	600	5.95	0.23	(3.05)
1176	3.67		0.70	3.19	700	5.50	0.29	(3.11)
					800	5.06	0.36	(3.17)
					1000	4.19	0.51	3.21

127.60 CREST; March 19, 1951; 0708 GCT;[a] 26°03.5'N, 115°44.5'W; sounding, 1973 fm; wind, 070°, force 5; weather, clear; sea, rough; wire angle, 20°.

646	5.66
669	5.61
691	5.48
716	5.37
740	5.32
763	5.16
787	5.05
811	4.92
835	4.84
859	4.74
882	4.64
907	4.54
931	4.44
956	4.36
981	4.23

a) Test cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
127.60	CREST; March 19, 1951; 0833 GCT; 26°03.5'N, 115°44.5'W; sounding, 1973 fm; wind, 070°, force 5; weather, clear; sea, rough; wire angle, 22°.							
0	17.46		5.31	-	0	17.46	5.31	
9	17.45	33.73	5.33	0.54	10	17.45	5.32	0.54
23	17.42		5.31	-	20	17.42	5.31	(0.54)
51	17.25		5.36	0.57	30	17.35	5.31	(0.57)
74	17.24		5.42	0.56	50	17.25	5.35	(0.57)
103	15.88		5.57	0.69	75	17.24	5.43	0.56
151	12.03		4.00	-	100	17.22	5.57	0.65
200	10.57		2.25	2.34	150	12.09	4.05	1.57
295	9.04		1.23	2.83	200	10.57	2.25	2.34
394	7.46		0.84	3.09	250	9.73	1.55	2.65
491	6.48		-	3.24	300	8.97	1.20	2.85
587	5.96		0.41	3.35	400	7.39	0.82	3.10
777	5.04		0.38	-	500	6.41	0.55	3.25
973	4.24		0.62	3.47	600	5.91	0.40	(3.36)
1171	3.65		0.76	-	700	5.45	0.38	(3.43)
					800	4.94	0.39	(3.47)
					1000	4.14	0.64	(3.47)
130.35	HORIZON; March 20, 1951; 2052, 2120 GCT; 26°14.5'N, 113°48.5'W; sounding, 360 fm; wind, 220°, force 3; weather, cloudy; sea, moderate; wire angle, 02°, missing.							
0	17.10		4.92	0.48	0	17.10	4.92	0.48
10	16.65	33.62	5.17	0.48	10	16.65	5.17	0.48
25	16.46		5.09	0.43	20	16.49	5.10	0.43
50	15.22		5.27	0.49	30	16.28	5.12	0.44
74	13.00		4.49	0.80	50	15.22	5.27	0.49
99	10.76		3.82	1.36	75	13.00	4.45	0.81
153	11.88		0.67	-	100	10.74	3.78	1.40
200	11.52		0.70	2.61	150	11.88	0.68	2.52
247	10.73		0.48	2.71	200	11.52	0.70	2.61
296	10.10		0.55u	2.77	250	10.68	0.47	2.71
352	9.46		0.30	-	300	10.05	0.37	2.77
401	8.75		0.27	2.85	400	8.78	0.27	2.84
499	7.32		0.30	2.96	500	7.32	0.30	2.96
					600	6.45	0.28	3.05
682	5.96		0.25	3.11				
130.40	HORIZON; March 21, 1951; 0035 GCT; 26°09'N, 114°07.5'W; sounding, 1250 fm; wind, 320°, force 1; weather, cloudy; sea, moderate; wire angle, 07°.							
0	17.48		5.34	0.47	0	17.48	5.34	0.47
10	16.82	33.66	5.17	0.45	10	16.82	5.17	0.45
25	16.18		5.05	0.44	20	16.64	5.07	0.44
49	14.15		5.32	-	30	15.75	5.07	0.43
74	12.25		4.51	0.40	50	14.15	5.32	0.41
					75	(12.25)	(4.50)	(0.40)
130.50	HORIZON; March 21, 1951; 0655 GCT; 25°47'N, 114°47.5'W; sounding, 1800 fm; wind, 320°, force 3; weather, partly cloudy; sea, slight; wire angle, 25°.							
0	17.30		5.40	0.31	0	17.30	5.40	0.31
9	17.28	33.66	5.39	0.35	10	17.28	5.39	0.35
23	17.26		5.39	0.33	20	17.27	5.39	0.34
45	17.16		5.33	0.33	30	17.23	5.36	0.33
67	16.77		5.44	0.44	50	17.14	5.37	0.35
89	15.22		5.63	0.41	75	16.05	5.50	0.43
136	12.26		4.31	-	100	14.84	5.62	(0.43)
174	10.17		3.09	-	150	11.52	3.85	
249	8.44		2.96u	-	200	9.45	2.62	
327	7.76		1.25	2.57	250	8.43	2.01	
405	7.22		0.67	-	300	7.92	1.51	
485	7.17		0.23	-	400	7.23	0.70	
648	5.81		0.29	3.10	500	7.13	0.23	
820	4.76		0.29	3.13	600	6.34	0.26	
1015	4.08		0.55	3.27	700	5.38	0.29	3.10
					800	4.85	0.29	3.13
					1000	4.12	0.52	3.26

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; March 21, 1951; 1251, 1322, 1431 GCT; 25°26'N, 115°27.5'W; sounding, 1910 fm; wind, 320°, force 1; weather, cloudy; sea, moderate; wire angle, 04°, missing, 10°. 130.60

0	17.55		5.07	0.42	0	17.55	5.07	0.42
10	17.56	33.73	5.25	0.54	10	17.56	5.25	0.54
25	17.45		5.14	0.35	20	17.50	5.19	0.36
50	17.25		5.20	0.39	30	17.42	5.14	0.36
75	16.80		5.11	0.39	50	17.25	5.20	0.39
99	16.04		5.26	0.43	75	16.80	5.11	0.39
153	12.33		4.34	0.98	100	15.94	5.25	0.43
201	11.01		1.98	2.04	150	12.45	4.39	0.92
296	9.70		0.79	-	200	11.05	2.00	2.01
397	8.28		0.47	2.84	250	10.26	1.23	2.34
494	6.50		0.44	-	300	9.63	0.77	2.53
596	6.07		0.29	3.09	400	8.22	0.47	2.85
795	4.92		0.36	3.20	500	6.46	0.43	3.06
					600	6.05	0.30	3.09
992	4.24		0.43	3.22	700	5.52	0.33	3.14
1197	3.64		0.53	3.17	800	4.89	0.36	3.20
					1000	4.19	0.44	3.21
992a)	4.20		0.41	3.20	1200	3.62	0.54	(3.23)
1186	3.66		0.55	-	1500	2.95	0.70	(3.23)
1482	2.99		0.69	-	2000	2.12	1.93	
1726	2.47		1.10	3.39r	2500	1.78	2.17	
1975	2.14		1.89	-	3000	1.65	2.60	
2227	1.92		2.16	-				
2472	1.80		2.14	-				
2746	1.71		2.51	2.27r				
3048	1.64		2.61	2.66				

HORIZON; March 21, 1951; 2023 GCT; 25°11'N, 116°05'W; sounding, 1840 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 04°. 130.70

0	17.99		5.11	0	17.99	5.11
10	17.56	33.77	5.14	10	17.56	5.14
25	-		5.27	20	17.45	5.23
50	17.30		5.17	30	17.39	5.27
75	16.83		5.20	50	17.30	5.17
99	14.55		5.22	75	16.83	5.20
152	11.76		2.48	100	14.52	5.22
197	9.22		3.43u	150	11.87	2.52
290	9.51		0.74	200	9.23	1.35
385	8.40		0.36	250	9.36	0.88
478	7.52		0.26	300	9.50	0.71
574	6.78		0.30	400	8.18	0.33
766	5.48		0.28	500	7.37	0.27
959	4.32		0.55	600	6.56	0.30
1163	3.72		0.75	700	5.89	0.30
				800	5.27	0.31
				1000	4.13	0.62

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
130.80	HORIZON; March 22, 1951; 0130 GCT; 24°49'N, 116°46.5'W; sounding, 2030 fm; wind, 290°, force 1; weather, cloudy; sea, slight; wire angle, 05°.							
0	18.18		5.33		0	18.18	5.33	
10	17.63	33.78	5.24		10	17.63	5.24	
25	-		5.33		20	17.39	5.30	
49	16.18		5.40		30	17.05	5.35	
74	15.03		5.52		50	16.12	5.40	
98	12.64		3.70		75	15.00	5.52	
151	11.50		1.43		100	12.58	3.53	
201	10.79		0.98		150	11.52	1.48	
297	9.98		0.38		200	10.81	0.98	
397	8.48		0.30		250	10.34	0.57	
493	7.18		0.24		300	9.94	0.38	
595	6.42		0.28		400	8.42	0.30	
704	5.86		0.33		500	7.13	0.24	
988	4.20		0.55		600	6.39	0.28	
1193	3.65		0.75		700	5.87	0.32	
					800	5.37	0.33	
					1000	4.14	0.57	
133.40	HORIZON; March 20, 1951; 0747 GCT; 25°37.5'N, 113°43'W; sounding, 1250 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 15°.							
0	16.80		5.30	0.42	0	16.80	5.30	0.42
10	16.75	33.69	5.40	0.38	10	16.75	5.40	0.38
24	16.24		5.46	0.40	20	16.50	5.45	0.39
48	15.55		5.39	0.45	30	15.93	5.46	0.41
71	13.02		4.87	0.69	50	15.53	5.37	0.46
94	11.68		4.15	1.15	75	12.73	4.75	0.75
144	12.02		1.09	2.37	100	11.00	3.90	1.34
190	10.94		0.98	2.44	150	12.00	1.07	2.39
280	10.00		0.36	2.72	200	10.80	0.98	2.46
376	8.99		0.25	2.81	250	10.26	0.44	2.62
467	7.92		0.25	2.88	300	9.80	0.34	2.75
563	6.96		0.20	3.01	400	8.72	0.25	2.82
752	5.55		0.35	-	500	7.57	0.25	2.92
942	4.62		0.50	3.13	600	6.63	0.25	(3.03)
1143	3.95		0.66	3.14	700	5.90	0.32	(3.06)
					800	5.28	0.39	(3.08)
					1000	4.40	0.56	3.13
133.50	HORIZON; March 20, 1951; 0151 GCT; 25°14.5'N, 114°25'W; sounding, 1550 fm; wind, calm; weather, clear; sea, moderate; wire angle, 07°.							
0	18.06		5.27	-	0	18.06	5.27	
10	17.51	33.75	5.25	0.35	10	17.51	5.25	0.35
25	17.49		5.20	0.34	20	17.49	5.22	0.34
50	17.10		5.26	0.34	30	17.45	5.22	0.34
75	15.54		5.32	0.38	50	17.10	5.26	0.34
99	14.50		5.37	-	75	15.54	5.32	0.38
152	11.14		2.76	1.74	100	14.30	5.37	0.59
199	11.08		1.17	2.31	150	11.16	2.85	1.70
293	10.22		0.39	2.63	200	11.08	1.13	2.33
392	8.59		0.44	-	250	10.79	0.55	2.52
486	7.49		0.26	2.91	300	10.10	0.39	2.65
585	6.50		0.26	3.02	400	8.48	0.44	2.88
778	5.16		0.32	3.11	500	7.34	0.26	2.92
967	4.36		0.43	3.14	600	6.38	0.26	3.04
1170	3.81		0.58	-	700	5.68	0.29	3.09
					800	5.03	0.33	3.12
					1000	4.23	0.47	(3.14)

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; March 19, 1951; 1939 GCT; 24°52.5'N, 115°03.5'W; sounding, 1900 fm; wind, 020°, force 2; weather, clear; sea, rough; wire angle, 15°. 133.60

0	17.60		5.20	0.40	0	17.60	5.20	0.40
10	17.34	33.68	5.15	0.37	10	17.34	5.15	0.37
24	16.00		5.24	0.44	20	16.05	5.22	0.43
48	15.88		5.21	0.39	30	15.95	5.24	0.43
72	15.49		5.27	0.52	50	15.86	5.23	0.40
95	12.76		4.38	0.97	75	14.90	5.25	0.56
145	12.32		1.26	-	100	12.70	3.95	(1.14)
185	11.77		0.56	-	150	12.28	1.15	
276	10.44		0.31	-	200	11.50	0.45	
368	9.20		0.21	-	250	10.77	0.33	
458	7.80		0.22	2.99	300	10.11	0.30	
550	6.74		0.19	3.11	400	8.75	0.21	
734	5.58		0.25	-	500	7.25	0.20	
917	4.66		0.35	-	600	6.34	0.20	
1117	3.94		0.64	-	700	5.77	0.25	
					800	5.25	0.27	
					1000	4.31	0.45	

HORIZON; March 18, 1951; 2254 GCT; 25°10.5'N, 113°04'W; sounding, 800 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 12°. 137.35

0	17.60		5.42	0.57	0	17.60	5.42	0.57
10	17.07	33.77	5.47	0.49	10	17.07	5.47	0.49
24	16.24		5.58	0.53	20	16.46	5.57	0.52
48	15.16		5.19	0.60	30	15.94	5.58	0.54
72	13.36		4.36	1.08	50	14.87	5.13	0.61
95	12.22		2.69	-	75	13.08	4.19	1.20
146	12.20		0.57	2.46	100	12.21	2.28	1.80
192	11.49		0.29	-	150	12.18	0.53	(2.49)
282	10.59		0.26	2.82	200	11.36	0.27	(2.65)
379	9.11		0.25	-	250	10.84	0.26	(2.76)
470	7.96		0.25	2.98	300	10.40	0.26	2.85
567	6.84		0.33	3.11	400	8.85	0.25	2.91
759	5.56		0.77r	3.13	500	7.62	0.26	3.01
950	4.51		0.52	3.20	600	6.55	0.35	3.13
1151	3.79		0.77	-	700	5.89	0.40	3.13
					800	5.38	0.45	3.14
					1000	4.27	0.57	(3.21)

HORIZON; March 19, 1951; 0247 GCT; 24°58.5'N, 113°24.5'W; sounding, 1650 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°. 137.40

0	17.54		5.37	0.50	0	17.54	5.37	0.50
10	17.14	33.98	5.20	0.43	10	17.14	5.20	0.43
25	16.82		5.37	0.48	20	16.92	5.32	0.46
49	15.40		5.31	-	30	16.73	5.37	0.50
73	13.27		4.63	0.85	50	15.35	5.30	0.57
97	11.70		3.03	1.57	75	13.08	4.52	0.90
149	11.05		1.38	2.28	100	11.63	2.82	1.65
195	10.54		0.93	2.44	150	11.02	1.38	2.29
289	9.69		0.41	2.71	200	10.48	0.91	2.46
387	8.56		0.27	2.85	250	10.02	0.59	2.60
481	7.64		0.23	2.95	300	9.58	0.39	2.74
580	6.75		0.26	2.98	400	8.41	0.26	2.87
774	5.42		0.30	-	500	7.48	0.24	2.96
969	4.40		0.49	3.11	600	6.58	0.27	(2.99)
1173	3.84		0.67	3.12	700	5.88	0.30	(3.02)
					800	5.27	0.32	(3.06)
					1000	4.28	0.53	3.12

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
137.50	HORIZON; March 19, 1951; 0830 GCT; 24°41'N, 114°01.5'W; sounding, 2150 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 05°.							
0	17.16		5.22	0.40	0	17.16	5.22	0.40
10	17.15	33.78	5.40	0.45	10	17.15	5.40	0.45
25	16.17		5.39	0.40	20	16.70	5.40	0.41
50	16.10		5.40	0.43	30	16.14	5.39	0.41
74	14.70		4.87	0.65	50	16.10	5.40	0.43
98	12.45		3.23	1.43	75	14.50	4.70	0.68
151	11.58		1.40	-	100	12.40	3.13	1.50
198	11.04		0.81	2.45	150	11.60	1.42	2.20
293	10.02		0.26	2.78	200	11.02	0.80	2.46
395	8.40		0.24	2.92	250	10.48	0.46	2.66
489	7.35		0.23	-	300	9.92	0.25	2.80
499p	7.22		0.25	3.04	400	8.34	0.23	2.93
669p	5.66		0.26	3.16	500	7.19	0.25	3.04
840p	4.76		0.38	-	600	6.19	0.26	3.12
1028p	4.06		0.55	3.14	700	5.46	0.27	3.18
					800	4.94	0.33	3.18
					1000	4.15	0.52	3.15
137.60	HORIZON; March 19, 1951; 1410 GCT; 24°21'N, 114°39.5'W; sounding, 1900 fm; wind, 320°, force 1; weather, partly cloudy; sea, moderate; wire angle, 05°.							
0	18.32		5.29	0.46	0	18.32	5.29	0.46
10	18.32	34.02	5.24	0.45	10	18.32	5.24	0.45
25	18.32		5.27	0.45	20	18.32	5.27	0.45
50	18.33		5.22	0.42	30	18.32	5.25	0.44
74	17.72		5.32	-	50	18.33	5.22	0.42
98	13.32		4.44	0.95	75	17.60	5.32	0.57
151	11.62		1.72	2.13	100	13.23	4.40	1.00
201	11.16		0.94	2.45	150	11.65	1.75	2.13
297	9.45		0.51	-	200	11.17	0.95	2.45
398	8.20		0.35	2.93	250	10.49	0.68	2.63
494	7.13		0.25	3.12	300	9.38	0.50	2.77
595	6.30		0.25	3.14	400	8.18	0.35	2.94
792	5.05		0.34	3.23	500	7.09	0.25	3.13
987	4.26		0.45	-	600	6.25	0.25	3.14
1192	3.68		0.75	3.20	700	5.59	0.27	3.18
					800	5.00	0.34	3.24
					1000	4.20	0.47	(3.31)
140.35	HORIZON; March 15, 1951; 0055 GCT; 24°33.5'N, 112°42.5'W; sounding, 230 fm; wind, 220°, force 1; weather, partly cloudy; sea, slight; wire angle, 02°.							
0	16.74		5.44	-	0	16.74	5.44	
10	15.70	33.73	5.57	0.54	10	15.70	5.57	0.54
25	14.74		4.89	0.79	20	15.05	5.50	0.59
50	13.06		3.52	1.29	30	14.51	4.55	0.94
74	12.75		2.33	1.72	50	13.06	3.52	1.29
98	12.62		0.89	-	75	12.74	2.27	(1.77)
151	11.84		0.45	2.54	100	12.60	0.85	(2.31)
199	11.12		0.31	2.64	150	11.85	0.46	(2.54)
247	10.70		0.26	2.71	200	11.10	0.31	2.65
295	10.01		0.28	2.78	250	10.66	0.27	2.72
348	9.30		0.16	-	300	9.93	0.27	2.79
398	8.82		0.19	2.92	400	(8.79)	(0.20)	(2.93)

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; March 14, 1951; 1805, 1945 GCT; 24°27'N, 113°08'W; sounding, 1750 fm; wind, 210°, force 1; weather, cloudy; sea, slight; wire angle, 00°, 30°. 140.40

0	18.16		-	-	0	18.16		
10	17.88	33.98	-	0.55	10	17.88		0.55
25	17.83		-	0.47	20	17.84		0.49
50	17.05		-	0.45	30	17.65		0.46
74	13.66		-	0.72	50	17.05		0.45
98	12.16		2.15	-	75	13.50		0.76
150	11.61		0.99	2.34	100	12.13	2.08	1.49
198	11.30		0.40	-	150	11.61	0.99	2.34
292	10.00		0.23	2.78	200	11.27	0.38	2.59
391	8.64		0.22	3.04	250	10.65	0.27	2.70
486	7.60		0.15	3.16	300	9.87	0.23	2.80
					400	8.51	0.20	3.05
517	7.42		0.20	-	500	7.50	0.17	(3.16)
856	5.07		0.25	3.15	600	(6.78)	(0.24)	(3.16)
1027	4.28		0.47	-	700	(6.01)	(0.24)	(3.16)
1285	3.45		0.74	3.07	800	(5.36)	(0.25)	(3.16)
1503	2.98		1.02	-	1000	4.39	0.45	3.15
1727	2.58		1.39	2.92	1200	3.70	0.63	3.10
1954	2.20		1.79	2.80	1500	3.00	1.02	2.96
2183	1.96		1.90	-	2000	2.13	1.83	2.77
2425	1.82		2.18	2.65	2500	1.78	2.27	2.65
2710	1.72		2.44	2.65				

HORIZON; March 14, 1951; 1155 GCT; 24°12.5'N, 113°32'W; sounding, 1900 fm; wind, 220°, force 1; weather, partly cloudy; sea, moderate; wire angle, 08°. 140.50

0	18.30	34.09	5.12	-	0	18.30	5.12	
10	17.84		5.10	0.34	10	17.84	5.10	0.34
25	17.73		5.06	0.37	20	17.75	5.07	0.36
49	17.28		5.12	0.37	30	17.67	5.07	0.37
73	14.10		5.12	0.51	50	17.23	5.12	0.37
97	12.22		3.87	1.03	75	13.85	5.10	0.54
148	10.83		1.83	2.01	100	12.08	3.57	1.09
194	10.76		0.79	2.47	150	10.82	1.78	2.08
287	10.04		0.26	2.76	200	10.74	0.70	2.50
386	8.77		0.19	-	250	10.41	0.37	2.67
481	7.62		0.22	2.96	300	9.88	0.23	2.78
580	6.68		0.23	3.09	400	8.59	0.19	2.88
774	5.30		0.31	3.13	500	7.42	0.22	2.99
966	4.42		0.40	3.13	600	6.52	0.23	3.10
1169	3.84		0.66	3.18	700	5.78	0.26	3.11
					800	5.15	0.33	3.13
					1000	4.29	0.42	3.13

HORIZON; March 14, 1951; 0558 GCT; 23°49.5'N, 114°13.5'W; sounding, 1950 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 09°. 140.60

0	18.60		5.04	0.39	0	18.60	5.04	0.39
13	18.33	34.05	5.09	0.40	10	18.38	5.08	0.40
30	18.30		4.99	-	20	18.30	5.05	(0.40)
57	18.26		5.04	0.38	30	18.30	4.99	(0.39)
85	13.84		5.24	0.58	50	18.27	5.02	(0.38)
110	11.92		3.91	1.18	75	17.15	5.15	0.44
163	11.06		1.60	-	100	12.50	4.50	0.94
209	10.68		0.88	2.40	150	11.21	2.00	2.04
300	9.37		0.53	2.68	200	10.74	0.95	2.37
397	8.11		0.35	2.86	250	10.19	0.62	2.55
490	7.11		0.31	-	300	9.37	0.53	2.68
586	6.40		0.30	3.02	400	8.07	0.35	2.86
778	5.28		0.31	3.14	500	7.02	0.30	2.96
972	4.44		0.52	3.15	600	6.32	0.30	3.03
1175	3.78		0.67	3.11	700	5.73	0.30	3.09
					800	5.16	0.31	3.15
					1000	4.35	0.55	3.15

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
140.70	HORIZON; March 14, 1951; 0006 GCT; 23°29'N, 114°54'W; sounding, 2000 fm; wind, 290°, force 1; weather, overcast; sea, rough; wire angle, 11°.							
0	18.31		5.18	0.41	0	18.31	5.18	0.41
10	17.99	33.98	5.07	0.37	10	17.99	5.07	0.37
25	17.95		5.04	0.35	20	17.95	5.04	0.36
49	17.88		5.22	0.36	30	17.93	5.06	0.35
73	17.64		5.14	0.38	50	17.87	5.22	0.36
97	12.89		4.03	1.07	75	17.62	5.10	0.38
148	11.07		1.80	2.04	100	12.60	3.80	1.10
194	10.44		1.02	2.40	150	11.02	1.75	2.08
285	9.50		0.55	2.64	200	10.37	0.98	2.44
383	8.51		0.25	-	250	9.84	0.69	2.58
476	7.70		0.19	2.96	300	9.33	0.49	2.85
573	6.60		0.20	-	400	8.36	0.23	2.83
765	5.38		0.29	3.09	500	7.48	0.19	(2.98)
957	4.48		0.45	3.16	600	6.34	0.20	(3.05)
1158	3.87		0.61	-	700	5.71	0.24	(3.08)
					800	5.21	0.31	3.09
					1000	4.33	0.49	(3.16)
140.80	HORIZON; March 13, 1951; 1545, 1724 GCT; 23°10'N, 115°30.5'W; sounding, 2050 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 11°, 20°.							
0	18.01		5.04	-	0	18.01	5.04	
10	18.03	33.95	5.06	0.35	10	18.03	5.06	0.35
25	18.38		4.93	0.33	20	18.15	4.99	0.34
50	18.66		5.06	0.34	30	18.49	4.93	0.33
74	18.80		5.01	0.27	50	18.66	5.06	0.34
98	14.76		5.17	-	75	18.80	5.03	(0.27)
					100	(14.60)	(5.17)	
562	6.78		0.26	-				
931	4.62		0.36	-				
1119	3.93		0.53	-				
1403	3.23		0.84	3.03				
1648	2.68		1.30	-				
1882	2.31		1.74	-				
2125	2.05		2.00	2.72	600	(6.48)	(0.27)	
2371	1.90		2.16	2.64	700	(5.77)	(0.27)	
2633	1.77		2.35	2.54	800	(5.15)	(0.29)	
2925	1.69		2.53	2.55	1000	4.28	0.48	
					1200	3.73	0.63	
					1500	3.02	1.00	
					2000	2.18	1.89	
					2500	1.83	2.25	
143.35	HORIZON; March 16, 1951; 1818 GCT; 23°56.5'N, 112°14.5'W; sounding, 450 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.							
0	18.69		4.94	0.42	0	18.69	4.94	0.42
10	18.44	34.11	5.12	0.41	10	18.44	5.12	0.41
25	17.52		5.09	0.44	20	18.00	5.10	0.43
49	16.45		5.19	0.51	30	17.30	5.11	0.45
73	13.41		3.78	1.14	50	16.25	5.19	0.51
97	12.33		2.02	1.90	75	13.26	3.65	1.26
148	11.23		1.07	2.38	100	12.25	1.90	1.97
197	10.40		0.66	2.49	150	11.19	1.03	2.39
243	10.38		0.30	-	200	10.40	0.65	2.50
290	10.18		0.22	2.76	250	10.37	0.29	2.73
342	9.32		0.20	2.83	300	10.07	0.22	2.77
389	8.90		0.20	2.78	400	8.80	0.20	2.78
485	7.73		0.22	2.98	500	7.57	0.22	3.02
587	6.80		0.21	-	600	6.73	0.21	3.17
687	6.32		0.18	3.24				

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
HORIZON; March 16, 1951; 1424 GCT; 23°47.5'N, 112°38'W; sounding, 1650 fm; wind, 360°, force 1; weather, cloudy; sea, moderate; wire angle, 00°.								143.40
0	18.58		5.22	0.41	0	18.58	5.22	0.41
10	18.34	33.75	5.13	0.38	10	18.34	5.13	0.38
25	17.92		5.17	0.56	20	18.04	5.15	0.55
50	16.40		5.30	0.53	30	17.90	5.20	0.56
75	13.04		4.00	1.04	50	16.40	5.30	0.53
99	12.61		2.18	-	75	13.04	4.00	1.04
153	12.00		0.92	2.37	100	12.58	2.17	1.85
201	11.27		0.45	2.58	150	12.03	0.98	2.36
298	10.03		0.24	2.76	200	11.28	0.47	2.58
400	8.63		0.25	-	250	10.59	0.30	2.69
496	7.36		0.24	-	300	10.00	0.24	(2.77)
598	6.51		0.22	3.13	400	8.63	0.25	(2.90)
796	5.27		0.32	3.18	500	7.33	0.24	(3.09)
992	4.35		0.38	3.16	600	6.50	0.22	3.13
1197	3.79		0.63	3.18	700	5.83	0.27	3.17
					800	5.25	0.32	3.18
					1000	4.32	0.39	3.16
HORIZON; March 16, 1951; 0817 GCT; 23°31'N, 113°18'W; sounding, 1120 fm; wind, 290°, force 1; weather, partly cloudy; sea, slight; wire angle, 15°.								143.50
0	19.20		5.21	0.42	0	19.20	5.21	0.42
10	18.68	34.05	5.24	0.35	10	18.68	5.24	0.35
24	18.54		5.22	0.39	20	18.57	5.23	0.37
48	18.13		5.27	0.49	30	18.47	5.25	0.41
71	15.22		4.33	0.81	50	18.10	5.27	0.50
95	12.40		4.20u	1.08	75	14.30	4.00	0.87
145	12.30		1.22	2.26	100	12.17	2.74	1.16
190	11.78		0.64	2.43	150	12.25	1.14	2.29
282	10.51		0.31	2.66	200	11.65	0.56	2.46
378	8.85		0.17	2.80	250	10.97	0.36	2.59
471	7.71		0.22	2.90	300	10.25	0.28	2.70
569	6.60		0.28	3.02	400	8.50	0.17	2.82
760	5.38		0.33	3.13	500	7.40	0.25	2.94
950	4.54		0.55	3.11	600	6.32	0.29	3.05
1153	3.84		0.66	3.14	700	5.69	0.31	3.11
					800	5.18	0.36	3.13
					1000	4.37	0.58	3.11
HORIZON; March 15, 1951; 1631 GCT; 23°46.5'N, 111°22'W; sounding, 215 fm; wind, 360°, force 1; weather, partly cloudy; sea, slight; wire angle, 02°.								147.25
0	17.26		5.04	0.58	0	17.26	5.04	0.58
10	16.20	33.95	5.31	0.63	10	16.20	5.31	0.63
25	13.66		3.96	-	20	13.70	5.25	(0.70)
50	12.85		2.43	1.70	30	13.65	4.60	(0.80)
75	12.92		1.07	2.22	50	12.85	2.43	1.70
100	12.43		0.71	2.41	75	12.92	1.07	2.22
156	11.68		0.26	2.58	100	12.43	0.71	2.41
206	11.02		0.23	-	150	11.75	0.29	2.57
					200	11.06	0.23	

SIO

CCOFI 5103

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
147.40	HORIZON; March 16, 1951; 0200 GCT; 23°19'N, 112°23'W; sounding, 1700 fm; wind, 340°, force 1; weather, partly cloudy; sea, slight; wire angle, 17°.							
0	19.24		5.17	0.42	0	19.24	5.17	0.42
10	18.98	34.07	5.17	0.43	10	18.98	5.17	0.43
24	-		5.27	0.49	20	18.15	5.25	0.49
48	17.22		5.32	0.45	30	17.76	5.29	0.49
72	14.76		4.25	-	50	17.15	5.31	(0.46)
96	13.76		1.60	-	75	14.61	3.35	
148	12.36		0.54	-	100	13.64	1.41	
195	11.64		0.26	2.60	150	12.35	0.51	
262p	10.78		0.21	2.71	200	11.58	0.25	
389	9.02		0.19	-	250	10.92	0.21	
482	7.81		0.17	3.01	300	10.25	0.20	
581	6.54		0.23	3.10	400	8.87	0.19	
774	5.26		0.30	3.13	500	7.56	0.17	3.03
962	4.46		0.45	-	600	6.36	0.23	3.11
1159	3.87		0.66	-	700	5.68	0.27	3.13
					800	5.14	0.32	
					1000	4.32	0.50	
150.25	HORIZON; March 11, 1951; 0906 GCT; 23°13.5'N, 110°59'W; sounding, 610 fm; wind, 340°, force 3; weather, thunderstorm with dust; sea, rough; wire angle, 25°.							
0	19.44		3.72	-	0	19.44	3.72	
10	19.43		3.12	0.67	10	19.43	3.12	0.67
23	19.21		3.03	0.67	20	19.34	3.05	0.67
46	16.75		2.01	1.57	30	18.65	2.95	0.69
68	14.52		0.60	2.29	50	15.50	1.70	1.67
90	14.30		0.35	-	75	14.43	0.49	2.42
138	12.72		0.17	2.61	100	14.14	0.30	2.57
182	11.72		0.17	2.69	150	12.33	0.17	2.63
226	11.11		0.17	2.76	200	11.45	0.17	2.72
271	10.48		0.13	-	250	10.77	0.15	(2.78)
320	9.82		0.16	2.96r	300	10.09	0.14	(2.81)
366	9.17		0.14	-	400	8.77	0.15	(2.84)
457	8.12		0.18	2.86	500	7.70	0.16	2.89
555	7.20		0.15	2.94	600	6.80	0.15	2.99
652	6.34		0.17	3.06				
150.30	HORIZON; March 11, 1951; 1307, 1329 GCT; 23°03.5'N, 111°15.5'W; sounding, 1240 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 42°, 45°.							
0	18.88		4.96	0.48	0	18.88	4.96	0.48
8	18.88	34.45	5.01	0.50	10	18.88	5.02	(0.49)
					20	18.40	5.12	(0.47)
18	18.44		5.12	-	30	17.70	5.00	(0.49)
39	17.04		4.62	0.64	50	16.39	4.13	0.95
56	16.05		3.91	1.08	75	15.25	2.50	1.73
76	15.22		2.29	1.78	100	13.70	0.99	2.24
109	13.14		0.86	2.31	150	12.45	0.31	(2.44)
140	12.62		0.36	-	200	11.67	0.22	(2.58)
200	11.67		0.22	-	250	11.08	0.18	(2.62)
264	10.93		0.17	2.63	300	10.41	0.15	2.67
325	9.98		0.15	2.71	400	8.87	0.17	
385	9.06		0.17	-	500	7.67	0.17	
595	6.53		0.17	3.01r	600	6.45	0.17	
641	6.09		0.17	3.07	700	5.68	0.19	3.08
811	5.03		0.27	3.08	800	5.10	0.26	3.08

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
HORIZON; March 11, 1951; 2015 GCT; 22°39'N, 112°02'W; sounding, 1650 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 15°.								150.40
0	19.70		5.06	0.49	0	19.70	5.06	0.49
10	19.68	34.54	4.91	0.49	10	19.68	4.91	0.49
29	19.38		5.20	0.51	20	19.57	5.07	0.50
58	14.89		2.97	1.40	30	19.30	5.20	0.51
86	13.22		1.39	-	50	16.25	3.80	1.11
114	12.62		0.60	2.42	75	13.76	1.82	
					100	12.87	0.90	
HORIZON; March 12, 1951; 0426 GCT; 22°21'N, 112°35'W; sounding, 1800 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 35°.								150.50
0	18.66		5.02	0.44	0	18.66	5.02	0.44
9	18.65	34.06	5.07	0.38	10	18.65	5.08	0.38
21	-		5.15	0.38	20	18.61	5.15	0.38
41	18.49		5.11	0.36	30	18.57	5.13	0.36
61	17.92		5.12	0.43	50	18.34	5.12	0.38
80	14.24		4.86	-	75	15.30	5.00	0.56
121	11.96		2.43	1.88	100	12.40	4.00	1.44
156	12.82		0.33	2.48	150	12.81	0.34	2.45
229	11.38		0.22	2.59	200	12.00	0.25	2.55
305	10.09		0.17	2.79	250	11.03	0.21	2.63
381	9.08		0.13	-	300	10.18	0.17	2.77
462	7.69		0.22	2.96	400	8.76	0.15	2.93
					500	(7.44)		
HORIZON; March 12, 1951; 1030 GCT; 22°04'N, 113°18'W; sounding, 2000 fm; wind, 270°, force 4; weather, clear; sea, very rough; wire angle, 15°.								150.60
0	18.94		4.71	0.41	0	18.94	4.71	0.41
10	18.94	34.05	5.15	0.37	10	18.94	5.15	0.37
24	18.95		4.78	0.36	20	18.95	4.97	0.36
53	18.64		4.04	0.35	30	18.93	4.61	0.35
77	14.29		4.44r	0.49	50	18.67	4.10	0.35
105	13.43		1.65	-	75	14.75	3.35	0.46
156	11.65		0.98	2.37	100	13.55	1.95	1.60
209	10.91		0.60	-	150	11.80	1.02	2.33
312	9.83		0.18	-	200	11.00	0.65	
421	8.28		0.25	2.82	250	10.48	0.39	
524	7.20		0.18	-	300	9.96	0.20	
628	6.29		0.20	-	400	8.60	0.23	
831	5.07		0.41	3.13	500	7.42	0.20	
1038	4.18		0.41	3.15	600	6.53	0.18	
1239	3.60		0.87	3.10	700	5.81	0.27	
					800	5.23	0.38	
					1000	4.33	0.41	3.14
HORIZON; March 12, 1951; 1632 GCT; 21°37'N, 113°50.5'W; sounding, 1960 fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 22°.								150.70
0	19.00		5.06	-	0	19.00	5.06	
9	18.97	34.12	5.02	0.34	10	18.97	5.03	0.34
23	18.99		5.04	0.35	20	18.98	5.04	0.35
47	18.96		4.96	0.34	30	18.98	5.00	0.35
70	16.75		5.04	-	50	18.88	4.96	0.35
92	13.36		4.30	0.82	75	15.45	5.04	0.62
140	12.45		1.23	-	100	13.16	3.63	1.03
181	11.78		0.39	2.58	150	12.28	0.84	2.28
265	10.54		0.27	-	200	11.49	0.34	
353	8.86		0.39	-	250	10.75	0.28	
436	7.64		0.33	-	300	9.93	0.32	
526	6.95		0.23	3.08	400	8.12	0.38	
707	5.55		0.31	3.10	500	7.12	0.24	
892	4.68		0.40	-	600	6.43	0.26	3.09
1092	3.98		0.71	3.15	700	5.61	0.31	3.10
					800	5.03	0.36	3.12
					1000	4.29	0.55	3.16

S10 / CCOFI 5103	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
150.80	HORIZON; March 12, 1951; 2207 GCT;[a] 21°21'N, 114°26'W; sounding, 1950 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 18°.								
	647	-		0.26	3.08				
	670	5.84		0.25	3.06				
	694	5.73		0.28	-				
	718	5.61		0.23	2.99u				
	741	5.49		0.26	3.07				
	765	5.34		0.23	3.10				
	790	5.20		0.30	3.15				
	814	5.09		0.23	-				
	837	4.99		0.45u	-				
	862	4.87		0.33	-				
	885	4.76		0.31	3.19				
	911	4.66		0.36	3.17				
150.80	HORIZON; March 13, 1951; 0007, 0148 GCT; 21°21'N, 114°26'W; sounding, 1950 fm; wind, 320°, force 2; weather, partly cloudy; sea, rough; wire angle, 12°, 15°.								
	0	20.21	34.29	5.35	0.36	0	20.21	5.35	0.36
	10	19.88	34.27	5.09	0.37	10	19.88	5.09	0.37
	24	19.86	34.25	5.06	0.36	20	19.86	5.07	0.36
	49	19.83	34.27	4.90	0.39	30	19.86	5.05	0.38
	73	18.28	33.98	5.30	0.37	50	19.83	4.90	0.39
	97	14.53	33.77	4.25	0.91	75	17.10	5.29	0.38
						100	(14.25)	(4.07)	
	574	6.47	34.43	0.13	3.07				
	951	4.60	34.51	0.38	3.24u				
	1140	3.86	34.54	0.69	-				
	1428	3.14	34.55	1.02	3.08				
	1668	2.61	-	1.32	2.84				
	1914	2.27	-	1.74	2.81				
	2163	2.02	-	2.05	2.70	600	6.31	0.15	
	2413	1.85	-	2.27	-	700	5.70	0.29	
	2677	1.74	-	2.40	2.56	800	5.21	0.35	
	2977	1.65	-	2.69	2.55	1000	4.44	0.48	
						1200	3.67	0.74	
						1500	2.97	1.11	3.02
						2000	2.17	1.86	2.78
						2500	1.80	2.32	2.56
						3000	(1.65)	(2.69)	(2.55)
153.20	HORIZON; March 11, 1951; 0145, 0205 GCT; 22°47.5'N, 110°22'W; sounding, 325 fm; wind, 290°, force 5; weather, overcast; sea, rough; wire angle, 20°, 19°.								
	0	21.62		5.02	0.57	0	21.62	5.02	0.57
						10	21.62	4.91	0.60
	10	21.62	34.88	4.91	0.60	20	21.55	4.92	0.62
	23	21.54		4.92	0.63	30	21.50	4.90	0.66
	46	20.72		4.45	0.89	50	20.69	4.06	1.40
	69	15.28		0.90r	-	75	13.75	2.30	2.34
	92	13.00		1.12	2.37	100	12.87	0.80	2.39
	149	12.36		0.28	2.68u	150	12.35	0.27	
	185	11.89		0.17	2.65	200	11.68	0.17	2.68
	230	11.27		0.17	2.72	250	11.06	0.18	2.76
	275	10.82		0.18	-	300	10.48	0.17	2.88
	326	9.98		0.16	2.91	400	8.90	0.19	2.97
	374	9.30		0.16	2.95				
	425	8.54		0.25	2.99				

a) Test cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

153.30

HORIZON; March 10, 1951; 1948 GCT; 22°33.5'N, 110°59.5'W; sounding, 1600 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 20°.

0	19.98		5.07	0.53	0	19.98	5.07	0.53
10	19.94	34.51	5.06	0.51	10	19.94	5.06	0.51
24	19.90		5.09	0.51	20	19.92	5.07	0.51
47	19.38		5.09	0.54	30	19.86	5.09	0.52
69	15.23		2.70	-	50	19.05	5.07	0.55
90	13.66		1.47	-	75	14.40	2.37	
135	12.64		0.41	-	100	13.40	1.05	
174	11.88		0.24	2.71	150	12.33	0.34	
254	10.67		0.18	-	200	11.45	0.19	
339	9.38		0.17	-	250	10.73	0.18	
424	8.46		0.17	3.02	300	9.99	0.17	
512	7.46		0.17	3.11	400	8.71	0.17	
691	5.90		0.23	3.22	500	7.60	0.17	3.10
874	4.92		0.24	-	600	6.65	0.18	3.18
1071	4.18		0.47	-	700	5.83	0.23	3.22
					800	5.27	0.23	3.27
					1000	4.41	0.36	

153.40

HORIZON; March 10, 1951; 1339 GCT; 22°10.5'N, 111°36'W; sounding, 1640 fm; wind, 290°, force 4; weather, heavy thunderstorm; sea, rough; wire angle, 22°.

0	19.35		4.03	0.44	0	19.35	4.03	0.44
9	19.35	34.29	4.10	0.43	10	19.35	4.10	0.43
23	19.34		3.35	0.42	20	19.34	3.75	0.42
46	18.88		3.49u	0.41	30	19.17	3.20	0.41
68	17.79		2.81	1.09	50	18.87	2.97	0.42
90	13.84		1.07	-	75	14.95	2.70	
136	12.75		0.35	2.51	100	13.52	0.70	
178	11.79		0.32	-	150	12.43	0.32	
265	10.46		0.29	-	200	11.42	0.31	
355	9.46		0.12	2.81	250	10.67	0.30	
441	8.14		0.19	-	300	10.01	0.25	
533	7.09		0.14	3.02	400	8.83	0.15	
					500	7.44	0.15	

153.50

HORIZON; March 10, 1951; 0700 GCT; 21°49'N, 112°13'W; sounding, 1640 fm; wind, 340°, force 1; weather, cloudy; sea, rough; wire angle, 10°.

0	19.69			0.43	0	19.69		0.43
10	19.70	34.33		0.43	10	19.70		0.43
25	-			0.42	20	19.67		0.42
49	19.48			0.40	30	19.62		0.41
73	15.25			-	50	19.47		0.40
96	13.72			2.03	75	14.95		1.42
149	11.54			2.30	100	13.55		2.06
196	11.09			2.51	150	11.53		2.31
290	-			2.72	200	11.05		2.52
389	8.80			2.87	250	10.43		2.64
483	7.58			3.00	300	9.82		2.74
582	6.58			3.05	400	8.65		2.88
					500	7.39		3.02
					600	(6.43)		

S10

CCOFI 5103

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
157.10	HORIZON; March 8, 1951; 1940 GCT; 22°33'N, 109°23'W; sounding, 1380 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 05°.							
0	21.81		4.89	0.65	0	21.81	4.89	0.65
10	21.12	35.07	4.95	-	10	21.12	4.95	0.75
25	19.92		5.12	1.01	20	20.36	5.10	0.90
50	17.65		3.63	1.77	30	19.75	5.12	1.12
75	14.90		0.98	-	50	17.65	3.63	1.77
100	14.02		0.55	2.47	75	14.90	0.98	2.38
153	12.46		0.37	2.55	100	14.02	0.55	2.47
201	11.56		0.22	2.40u	150	12.55	0.38	2.54
297	10.42		0.13	-	200	11.57	0.22	
396	8.86a)		0.15	-	250	10.91	0.15	
491	7.85		0.13	3.10	300	10.39	0.13	
592	6.84		0.19	3.23	400	8.80	0.15	
788	5.32		0.21	3.26	500	7.76	0.15	3.11
984	4.56		0.33	-	600	6.78	0.18	3.23
1188	3.92		0.53	-	700	5.94	0.19	3.26
					800	5.25	0.21	
					1000	4.51	0.34	
157.20	HORIZON; March 9, 1951; 0210 GCT; 22°13'N, 110°00'W; sounding, 1570 fm; wind, 250°, force 3; weather, partly cloudy; sea, moderate; wire angle, 35°.							
0	21.40			0.56	0	21.40		0.56
8	21.26	34.79		0.59	10	21.24		0.59
20	21.19			0.61	20	21.19		0.61
45	20.48			0.58	30	21.08		0.60
65	17.47			1.11	50	20.32		0.58
89	14.92			2.33	75	16.40		1.68
130	12.86			2.53	100	13.86		2.40
168	12.59			-	150	12.70		2.63
243	11.40			2.81	200	12.25		2.76
323	10.01			2.83	250	11.25		2.81
404	9.04			2.92	300	10.39		2.83
483	7.86			3.01	400	9.10		2.91
643	6.36			-	500	7.65		(3.03)
817	5.43			-	600	6.73		
1000	4.63			-	700	6.01		
					800	5.52		
					1000	4.63		
157.30	HORIZON; March 9, 1951; 0920 GCT; 21°53'N, 110°35'W; sounding, 1550 fm; wind, 270°, force 4; weather, clear; sea, rough; wire angle, 03°.							
0	22.38			0.47	0	22.38		0.47
10	22.36	34.81		0.46	10	22.36		0.46
25	20.82			0.62	20	22.20		0.53
54	19.86			1.17	30	20.55		0.69
79	18.26			-	50	19.98		1.07
108	14.91			2.36	75	18.76		1.84
161	11.80			2.46	100	15.85		2.32
215	10.90			2.64	150	12.32		2.45
321	10.22			2.80	200	11.09		2.59
433	8.43			-	250	10.63		2.71
540	7.18			3.07	300	10.34		2.77
647	6.31			3.21	400	9.03		2.91
858	5.12			3.20	500	7.63		3.04
1256	3.66			3.24	600	6.67		3.17
					700	5.94		3.21
					800	5.41		3.20
					1000	(4.57)		3.20

a) Mean value of 8.82 and 8.89°C.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; March 9, 1951; 1508 GCT; 21°31.5'N, 111°11'W; sounding, 1650 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 22°. 157.40

0	22.16		4.81	0.50	0	22.16	4.81	0.50
9	22.15	34.69	4.84	0.48	10	22.15	4.84	0.48
23	21.77		4.74	-	20	21.85	4.78	(0.42)
46	21.50		4.75	-	30	21.65	4.74	(0.43)
68	16.91		3.73	1.07	50	21.48	4.68	(0.59)
90	13.64		2.18	1.64	75	15.90	3.10	1.32
138	12.27		0.74	2.38	100	13.19	1.80	1.90
182	11.12		0.40	2.56	150	12.00	0.62	2.43
272	10.06		0.20	2.67	200	10.83	0.34	2.60
365	9.15		0.12	2.81	250	10.27	0.25	2.65
456	7.97		0.12	2.96	300	9.78	0.17	2.71
549	6.93		0.13	-	400	8.78	0.12	2.86
734	5.62		0.22	-	500	7.40	0.13	
920	4.69		0.25	3.13	600	6.51	0.14	
					700	5.83	0.20	
					800	5.25	0.23	
					1000	(4.38)		

HORIZON; March 9, 1951; 2143, 2302 GCT; 21°14'N, 111°50'W; sounding, 1600 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 25°, 13°. 157.50

0	20.98		5.10	-	0	20.98	5.10	
9	20.67	34.59	5.07	0.42	10	20.66	5.07	0.42
23	20.59		5.01	0.44	20	20.61	5.03	0.43
45	20.44		4.99	0.39	30	20.54	5.01	0.43
67	18.46		4.83	-	50	20.40	4.95	0.40
89	13.98		1.20	2.00	75	15.95	4.74	1.06
					100	13.58	0.96	2.19
145	12.48		0.51	2.48	150	12.40	0.48	(2.50)
192	11.83		0.28	-	200	11.67	0.27	
285	10.30		0.19	-	250	10.85	0.21	
385	8.98		0.18	2.86	300	10.09	0.19	
481	7.78		0.15	-	400	8.79	0.18	
579	6.64		0.19	-	500	7.53	0.15	
774	5.29		0.21	3.15	600	6.43	0.20	
967	4.48		0.34	-	700	5.69	0.20	
1169	3.78		0.79	3.15	800	5.17	0.22	
					1000	4.36	0.40	

HORIZON; March 10, 1951; 0027 GCT;[a] 21°14'N, 111°50'W; sounding, 1600 fm; wind, 290°, force 3; weather, cloudy; sea, rough; wire angle, 15°. 157.50

658	-	0.13	3.03
683	5.87	0.28	-
707	5.73	0.23	3.04
731	5.54	0.22	2.90u
754	5.43	0.19	2.94u
779	5.22	0.20	3.11
803	5.13	0.24	-
827	5.00	0.28	3.11
852	4.88	0.26	3.17
876	4.81	0.31	3.19
901	4.71	0.31	-
926	4.60	0.31	3.19

a) Test cast.

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5104

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

60.60

BLACK DOUGLAS; April 4, 1951; 1058 GCT; 37°37'N, 123°37'W; sounding, 1870 fm; wind, 310°, force 3; weather, intermittent drizzle; sea, rough; wire angle, 20°.

0	11.34		6.73	0	11.34	6.73
10	11.16	32.86	6.66	10	11.16	6.66
23	10.82		6.17	20	10.91	6.38
46	9.74		5.16	30	10.50	5.86
70	9.26		4.21	50	9.65	4.98
93	9.01		3.48	75	9.19	4.03
143	8.60		2.48	100	8.94	3.28
188	8.24		2.21	150	8.55	2.41
279	7.36		1.58	200	8.14	2.13
374	6.68		1.09	250	7.65	1.75
464	5.60		1.15	300	7.19	1.46
560	5.24		0.57	400	6.39	1.09
748	4.55		0.40	500	5.43	0.97
939	4.04		0.65	600	5.10	0.51
1140	3.55		0.74	700	4.73	0.42
				800	4.38	0.43
				1000	3.89	0.70

60.70

BLACK DOUGLAS; April 4, 1951; 1755, 2023 GCT; 37°17'N, 124°21'W; sounding, 2210 fm; wind, 330°, force 4; weather, overcast; sea, very rough; wire angle, 40°, 16°.

0	11.16		6.50	0	11.16	6.50
9	11.16	32.75	6.53	10	11.16	6.53
20	10.62		6.53	20	10.62	6.53
40	10.82		6.66	30	10.74	6.56
59	9.96		5.78	50	10.50	6.50
78	8.92		4.64	75	9.02	4.84
119	8.56		3.55	100	8.68	4.02
158	8.02		2.87	150	8.10	3.00
233	7.34		2.11	200	7.62	2.42
314	6.44		1.90	250	7.16	2.05
392	5.77		1.02	300	6.55	1.95
478	5.36		0.75	400	5.72	0.99
637	4.86		0.54	500	5.29	0.70
797	4.32		0.46	600	5.05	0.56
982	3.70		0.78	700	4.60	0.52
				800	4.30	0.46
587a)	5.10		0.57	1000	3.64	0.78
949	3.81		0.78	1200	3.25	1.00
1130	3.38		0.87	1500	2.64	1.35
1404	2.83		1.35	2000	2.02	1.78
1622	2.47		1.35	2500	1.78	2.32
1869	2.12		-			
2107	1.96		1.94			
2346	1.83		2.24			
2591	1.76		2.35			
2838	1.68		-			

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 5, 1951; 0515 GCT; 36°57'N, 125°04'W; sounding, 2200 fm; wind, 330°, force 7; weather, overcast; sea, high; wire angle, 00°. 60.80

0	11.45		6.40	0	11.45	6.40
10	11.43	32.77	6.34	10	11.43	6.34
25	11.44		6.35	20	11.44	6.34
50	11.46		6.25	30	11.45	6.34
74	11.48		6.21	50	11.46	6.25
99	9.60		5.18	75	11.47	6.21
152	8.84		3.12	100	9.58	5.15
201	8.15		2.74	150	8.86	3.15
296	7.30		1.80	200	8.17	2.74
395	6.19		1.21	250	7.68	2.31
491	5.64		0.70	300	7.25	1.77
592	5.16		0.49	400	6.15	1.18
790	4.36		0.42	500	5.60	0.67
986	3.83		0.52	600	5.12	0.48
1190	3.33		0.77	700	4.70	0.46
				800	4.33	0.42
				1000	3.80	0.52

BLACK DOUGLAS; April 5, 1951; 1735 GCT; 36°37'N, 125°47'W; sounding, 2480 fm; wind, 320°, force 6; weather, overcast; sea, very high; wire angle, 29°. 60.90

0	11.78		5.81	0	11.78	5.81
8	11.80	32.86	6.04	10	11.81	6.04
22	12.02		5.72	20	12.02	5.73
49	11.84		5.87	30	11.98	5.76
70	10.55		4.89	50	11.84	5.87
95	9.48		4.29	75	10.52	4.72
143	8.35		3.12	100	9.28	4.18
189	7.76		2.62	150	8.25	3.01
280	6.92		1.65	200	7.64	2.53
379	6.05		1.21	250	7.17	1.96
474	5.64		0.75	300	6.74	1.53
570	5.02		0.38	400	5.93	1.12
765	4.36		0.39	500	5.48	0.60
967	3.82		0.57	600	4.90	0.38
1166	3.32		0.79	700	4.55	0.38
				800	4.25	0.40
				1000	3.74	0.62

BLACK DOUGLAS; April 6, 1951; 0107 GCT; 36°17'N, 126°30'W; sounding, 2560 fm; wind, 330°, force 6; weather, overcast; sea, very high; wire angle, 11°. 60.100

0	12.18		6.20	0	12.18	6.20
10	12.18	32.90	6.21	10	12.18	6.21
25	12.18		6.25	20	12.18	6.24
50	12.18		6.25	30	12.18	6.25
74	11.04		5.73	50	12.18	6.25
98	9.28		4.63	75	10.98	5.71
148	8.41		3.42	100	9.23	4.53
192	8.00		2.87	150	8.39	3.38
281	7.05		2.13	200	7.91	2.79
375	6.08		1.45	250	7.39	2.38
463	5.77		0.86	300	6.85	1.98
557	5.20		0.73	400	5.94	1.28
742	4.52		0.45	500	5.59	0.77
926	3.89		0.59	600	5.00	0.69
1125	3.38		1.16	700	4.65	0.52
				800	4.31	0.45
				1000	3.70	0.77

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

60.110

BLACK DOUGLAS; April 6, 1951; 0659, 0952 GCT; 35°57'N, 127°12'W; sounding, 2640 fm; wind, 330°, force 5; weather, overcast; sea, high; wire angle, 05°, missing.

0	12.94		6.22	0	12.94	6.22
10	12.96	32.94	6.14	10	12.96	6.14
25	12.96		6.06	20	12.96	6.08
49	12.60		6.19	30	12.93	6.06
73	11.70		6.40	50	12.59	6.21
97	9.94		5.72	75	11.63	6.39
149	8.30		4.37	100	9.74	5.61
195	7.92		3.60	150	8.28	4.35
288	7.05		2.95	200	7.89	3.55
386	5.93		1.30	250	7.43	3.18
481	5.34		1.11	300	6.92	2.86
580	4.73		0.70	400	5.82	1.26
774	4.28		0.40	500	5.23	1.02
966	3.74		0.58	600	4.64	0.68
1166	3.31		0.88	700	4.42	0.53
				800	4.19	0.40
593a)	4.67		0.70	1000	3.55	0.64
957	3.60		0.61	1200	3.23	0.95
1141	3.28		0.83	1500	2.59	1.27
1419	2.74		1.21	2000	1.99	1.72
1652	2.40		1.43	2500	1.75	2.25
1888	2.10		1.62			
2126	1.92		1.86			
2368	1.8 b)		2.21			
2613	1.73		2.25			

61.55

BLACK DOUGLAS; April 3, 1951; 0341 GCT; 37°37'N, 123°07.5'W; sounding, 500 fm; wind, calm; weather, partly cloudy; sea, rough; wire angle, 02°.

0	10.39		6.09	0	10.39	6.09
10	9.50	33.27	5.08	10	9.50	5.08
25	9.07		5.71	20	9.16	5.70
51	8.94		5.36	30	9.04	5.65
74	8.94		5.02	50	8.95	5.38
99	8.78		3.12	75	8.94	4.97
152	8.36		2.32	100	8.77	3.08
200	8.00		1.93	150	8.38	2.33
246	7.84		1.71	200	8.00	1.93
293	7.52		1.94u	250	7.82	
392	6.90		1.07	300	7.47	
486	6.02		0.70	400	6.83	1.03
587	5.46		0.64	500	5.93	0.68
684	5.09		0.50	600	5.41	0.64
788	4.69		0.41	700	5.03	0.47
				800	(4.66)	

a) Overlapping casts; reconciliation of property curves when necessary.
b) Temperature inferred from pressure thermometer and wire depth.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 3, 1951; 0836 GCT; 37°09'N, 122°58'W; sounding, 350 fm; wind, 270°, force 1; weather, cloudy; sea, moderate; wire angle, 05°. 63.57

0	10.82		6.62	0	10.82	6.62
10	10.36		7.08	10	10.36	7.08
25	9.74		7.06	20	9.84	7.08
50	9.64		6.55	30	9.70	7.01
75	9.52		4.65	50	9.64	6.55
99	8.90		3.00	75	9.52	4.65
152	8.24		2.91	100	8.87	2.99
200	7.58		2.04	150	8.27	2.91
248	7.58		1.75	200	7.58	2.04
295	7.17		1.42	250	7.58	1.73
347	6.74		0.97	300	7.11	1.37
396	6.38		1.30u	400	6.35	
444	6.16		0.94	500	5.90	
493	5.94		1.28u	600	(5.21)	
597	5.24		0.55			

BLACK DOUGLAS; April 4, 1951; 0320 GCT; 36°49'N, 123°41'W; sounding, 2020 fm; wind, 320°, force 1; weather, cloudy; sea, rough; wire angle, 05°. 63.67

0	11.34		6.45	0	11.34	6.45
11	11.14	32.77	6.66	10	11.16	6.66
25	10.73		-	20	10.79	6.62
50	9.82		5.63	30	10.72	6.49
73	8.93		-	50	9.82	5.63
99	8.88		4.48	75	8.92	4.93
197	7.71		2.46	100	8.87	4.40
				150	8.36	2.73
				200	(7.67)	(2.43)

BLACK DOUGLAS; April 3, 1951; 1522 GCT; 36°39'N, 122°26'W; sounding, 1140 fm; wind, 010°, force 1; weather, cloudy; sea, very rough; wire angle, 00°. 67.55

0	12.16		6.09	0	12.16	6.09
10	11.87		-	10	11.87	
25	10.95		-	20	11.24	
50	10.04		4.77	30	10.78	
75	9.40		3.58	50	10.04	4.77
100	9.10		3.36	75	9.40	3.58
153	8.58		2.30	100	9.10	3.36
201	8.25		2.02	150	8.62	2.33
296	7.52		1.17	200	8.25	2.03
382	6.88		0.55	250	7.84	1.67
				300	7.50	1.13

BLACK DOUGLAS; April 3, 1951; 2106 GCT; 36°19'N, 123°09'W; sounding, 1780 fm; wind, 340°, force 1; weather, intermittent drizzle; sea, rough; wire angle, 06°. 67.65

0	11.83	6.53	0	11.83	6.53
10	11.44	6.62	10	11.44	6.62
25	11.16	6.59	20	11.21	6.61
50	11.16	6.31	30	11.16	6.56
75	9.45	5.66	50	11.16	6.31
99	9.33	4.45	75	9.45	5.66
153	8.28	3.34	100	9.33	4.40
201	7.73	2.85	150	8.37	3.38
296	6.90	1.69	200	7.74	2.86
396	6.13	1.39	250	7.30	2.22
490	5.48	0.74	300	6.87	1.67
589	5.23	0.45	400	6.09	1.37
783	4.50	0.49	500	5.43	0.70
976	3.92	0.85	600	5.20	0.45
1177	3.35	0.83	700	4.86	0.48
			800	4.44	0.50
			1000	3.85	0.84

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

70.55

BLACK DOUGLAS; April 8, 1951; 2143 GCT; 36°03'N, 122°02'W; sounding, 760 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 06°.

0	11.10		6.79	0	11.10	6.79
10	11.04	33.53	6.82	10	11.04	6.82
25	10.12		4.84	20	10.80	6.25
50	9.30		3.58	30	9.72	4.36
74	9.18		2.99	50	9.30	3.58
99	9.12		2.81	75	9.17	2.96
152	8.56		2.24	100	9.12	2.79
199	8.24		1.79	150	8.59	2.27
291	7.50		1.26	200	8.22	1.77
388	6.81		0.80	250	7.83	1.47
481	6.36		0.72	300	7.43	1.19
579	5.88		0.64	400	6.76	0.77
770	4.76		0.57	500	6.28	0.70
961	4.02		0.59	600	5.76	0.62
1162	3.42		0.92	700	5.19	0.57
				800	4.62	0.57
				1000	3.88	0.63

70.60

BLACK DOUGLAS; April 8, 1951; 1700 GCT; 35°53'N, 122°23'W; sounding, 1780 fm; wind, 330°, force 3; weather, fog; sea, very rough; wire angle, 12°.

0	12.32		5.65	0	12.32	5.65
10	12.46		5.84	10	12.46	5.84
24	12.11	33.16	5.62	20	12.26	5.77
49	10.50		5.34	30	11.97	5.53
73	10.12		4.06	50	10.48	5.33
96	9.32		3.77	75	10.08	4.02
145	8.46		2.43	100	9.18	3.73
188	7.88		2.33	150	8.39	2.42
275	7.40		1.64	200	7.76	2.24
368	6.54		0.89	250	7.50	1.83
457	5.67		0.70	300	7.23	1.44
549	5.14		0.72	400	6.22	0.77
735	4.56		0.53	500	5.39	0.70
923	4.02		0.49	600	4.95	0.70
1122	3.60		0.70	700	4.65	0.59
				800	4.39	0.49
				1000	3.84	0.55

70.70

BLACK DOUGLAS; April 8, 1951; 0855 GCT; 35°33'N, 123°06'W; sounding, 2130 fm; wind, 330°, force 4; weather, overcast; sea, very rough; wire angle, 11°.

0	12.32		6.25	0	12.32	6.25
10	12.32		6.34	10	12.32	6.34
25	12.32		6.32	20	12.32	6.34
49	10.80		5.57	30	12.27	6.26
73	10.38		5.08	50	10.78	5.55
98	9.60		4.06	75	10.33	5.05
150	8.38		2.73	100	9.50	3.93
196	8.07		2.06	150	8.38	2.73
288	7.20		1.55	200	8.04	2.02
384	6.30		0.97	250	7.59	1.71
476	5.75		0.73	300	7.08	1.49
573	5.26		0.41	400	6.18	0.90
763	4.48		0.39	500	5.63	0.64
954	3.91		0.63	600	5.13	0.40
1154	3.44		0.83	700	4.71	0.39
				800	4.37	0.43
				1000	3.77	0.67

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 8, 1951; 0200 GCT; 35°13'N, 123°48'W; sounding, 2260 fm; wind, 330°, force 5; weather, overcast; sea, high; wire angle, 20°. 70.80

0	11.30		5.97	0	11.30	5.97
11	11.30	32.95	6.01	10	11.30	6.01
25	10.54		5.90	20	11.23	5.96
48	10.36		5.77a)	30	10.48	5.86
71	9.44		5.80	50	10.33	5.77
93	9.18		5.94	75	9.37	5.82
142	8.77		4.39	100	9.13	5.94
183	8.00		3.11	150	8.67	4.05
267	7.24		2.41	200	7.78	2.90
354	6.80		1.79	250	7.36	2.51
439	6.19		1.02	300	7.07	2.21
528	5.31		0.63	400	6.49	1.37
702	4.56		0.42	500	5.60	0.69
877	4.05		0.50	600	4.93	0.53
1074	3.50		0.76	700	4.57	0.42
				800	4.26	0.46
				1000	3.71	0.64

BLACK DOUGLAS; April 7, 1951; 1930 GCT; 34°53'N, 124°30'W; sounding, 2400 fm; wind, 330°, force 5; weather, overcast; sea, high; wire angle, 08°. 70.90

0	12.64		6.12	0	12.64	6.12
10	12.63	32.84	6.25	10	12.63	6.25
25	12.64		6.09	20	12.63	6.15
50	12.64		6.03	30	12.64	6.07
75	10.76		5.73	50	12.64	6.03
99	9.62		5.24	75	10.76	5.73
152	8.82		4.02	100	9.61	5.21
201	8.14		3.09	150	8.85	4.07
294	7.30		1.83	200	8.15	3.13
393	6.24		1.16	250	7.66	2.37
488	5.77		0.59	300	7.24	1.78
587	5.26		0.45	400	6.18	1.12
783	4.49		0.42	500	5.73	0.55
977	3.87		0.64	600	5.17	0.45
1182	3.36		1.03	700	4.75	0.43
				800	4.44	0.43
				1000	3.80	0.69

BLACK DOUGLAS; April 7, 1951; 1030 GCT; 34°33'N, 125°12'W; sounding, 2500 fm; wind, 330°, force 6; weather, intermittent drizzle; sea, high; wire angle, 10°. 70.100

0	12.90		5.75	0	12.90	5.75
10	12.90	32.93	6.11	10	12.90	6.11
25	12.82		6.01	20	12.85	6.06
49	12.66		5.31	30	12.79	5.93
73	12.40		4.87	50	12.64	5.29
97	12.10		3.61	75	12.38	4.81
147	10.35		2.61	100	12.00	3.50
193	9.04		2.11	150	10.25	2.58
285	-		1.27	200	(8.87)	2.03
381	6.26		0.97	250	(7.90)	1.52
473	5.58		0.73	300	(7.19)	1.22
571	5.00		0.57	400	6.10	0.91
				500	5.40	0.67

a) Alternate value, 6.06 ml/L, not used in interpolation.

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

70.110 BLACK DOUGLAS; April 6, 1951; 2343 GCT; 34°13'N, 125°54'W; sounding, 2160 fm; wind, 340°, force 5; weather, intermittent rain; sea, high; wire angle, 23°.

0	13.80		5.88	0	13.80	5.88
9	13.80	33.08	5.39	10	13.80	5.39
23	13.81		5.53	20	13.81	5.51
46	13.81		5.21	30	13.81	5.44
70	13.80		5.61	50	13.81	5.21
92	13.82		5.37	75	13.82	5.59
139	9.74		4.89	100	13.77	5.27
181	8.66		3.40	150	9.34	4.67
262	7.64		2.97	200	8.38	3.27
348	6.69		1.89	250	7.78	3.04
431	5.80		1.30	300	7.22	2.47
519	5.42		0.77	400	6.13	1.49
694	4.82		0.49	500	5.46	0.85
873	4.24		0.70	600	5.17	0.60
1067	3.68		0.70	700	4.79	0.49
				800	4.45	0.60
				1000	3.87	0.70

70.110 BLACK DOUGLAS; April 7, 1951; 0126 GCT;[a] 34°13'N, 125°54'W; sounding, 2160 fm; wind, 340°, force 6; weather, intermittent rain; sea, high; wire angle, 10°.

664	4.66		0.59
688	4.64		0.58
712	4.58		0.61
735	4.60		0.61
760	4.57		0.63
784	4.54		0.62
807	4.38		0.72
831	4.24		0.45
856	4.25		0.60
880	4.20		0.59
904	4.12		0.70
929	4.04		0.76
954	4.00		0.58
979	3.90		0.73
1004	3.82		0.64

73.51 BLACK DOUGLAS; April 9, 1951; 0402 GCT; 35°35.5'N, 121°20'W; sounding, 165 fm; wind, 320°, force 2; weather, intermittent drizzle; sea, moderate; wire angle, 18°.

0	11.62		5.38	0	11.62	5.38
10	11.34	33.39	5.17	10	11.34	5.17
24	10.58		4.68	20	10.84	4.69
47	10.20		4.69	30	10.43	4.68
69	9.82		3.54	50	10.17	4.67
89	9.38		2.65	75	9.64	3.08
134	9.21		2.45	100	9.31	2.61
176	8.46		1.86	150	9.07	2.23
224	7.98		1.40	200	8.18	1.62

a) Test cast.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 9, 1951; 0956 GCT; 35°16'N, 122°02.5'W; 73.61
sounding, 1650 fm; wind, 310°, force 3; weather, fog; sea, rough;
wire angle, 08°.

0	13.06		6.05	0	13.06	6.05
10	13.06	33.10	6.03	10	13.06	6.03
25	13.05		6.13	20	13.05	6.10
49	11.15		5.28	30	13.01	6.11
73	9.86		3.89	50	11.10	5.20
98	9.13		3.60	75	9.73	3.87
151	8.46		2.73	100	9.11	3.56
198	7.72		2.57	150	8.48	2.74
290	6.86		1.59	200	7.70	2.55
388	5.92		1.10	250	7.23	1.97
481	5.42		0.75	300	6.76	1.54
580	5.11		0.50	400	5.82	1.06
773	4.50		0.49	500	5.34	0.68
965	3.90		0.64	600	5.05	0.50
1167	3.40		0.86	700	4.75	0.50
				800	4.41	0.50
				1000	3.81	0.67

BLACK DOUGLAS; April 9, 1951; 2207 GCT; 34°54.5'N, 121°13'W; 77.55
sounding, 325 fm; wind, 300°, force 3; weather, overcast; sea, rough;
wire angle, 18°.

0	12.72		6.11	0	12.72	6.11
10	12.70	33.13	6.03	10	12.70	6.03
24	12.44		6.04	20	12.55	6.03
48	10.65		5.39	30	12.05	6.04
72	9.96		4.79	50	10.55	5.34
95	9.75		3.43	75	9.92	4.65
145	8.98		2.57	100	9.71	3.29
189	8.46		2.26	150	8.89	2.52
233	8.18		1.81	200	8.37	2.17
276	7.72		1.24	250	8.03	1.57
325	7.16		1.10	300	7.45	1.15
371	6.40		1.06	400	6.33	0.87
417	6.32		0.70	500	(6.10)	
466	6.20		0.55			

BLACK DOUGLAS; April 9, 1951; 1714 GCT; 34°34'N, 121°55'W; 77.65
sounding, 2120 fm; wind, 310°, force 3; weather, overcast; sea, rough;
wire angle, 00°.

0	13.07		5.98	0	13.07	5.98
10	13.07	33.04	5.92	10	13.07	5.92
25	13.06		5.62	20	13.06	5.62
50	12.62		5.97	30	13.03	5.63
75	11.99		4.55a)	50	12.62	5.97
99	11.17		-	75	11.99	4.55
152	8.78		3.24	100	11.15	4.02
200	8.06		2.55	150	8.86	3.27
294	6.72		1.57	200	8.06	2.55
395	5.84		1.03	250	7.39	1.90
489	5.33		0.71	300	6.64	1.54
588	4.86		0.41	400	5.82	1.02
783	4.34		0.57	500	5.29	0.66
976	3.85		0.70	600	4.81	0.41
1179	3.38		0.89	700	4.50	0.49
				800	4.30	0.57
				1000	3.80	0.72

a) Alternate value, 4.67 ml/L, not used in interpolation.

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OBSERVED				INTERPOLATED		
Z	T	S	O_2	Z	T	O_2
m	°C	‰	ml/L	m	°C	ml/L

80.55 BLACK DOUGLAS; April 10, 1951; 0452 GCT; 34°19'N, 120°48'W; sounding, 409 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 12°.

0	13.22		5.28	0	13.22	5.28
10	13.22	32.98	4.57	10	13.22	4.57
25	11.74		4.55	20	12.45	4.55
49	11.54		5.20	30	11.67	4.60
74	9.56		3.90	50	11.52	5.20
98	9.69		3.38	75	9.56	3.90
151	8.94		2.35	100	9.69	3.35
197	8.50		1.52	150	8.96	2.39
243	8.32		1.39	200	8.48	1.49
290	7.90		1.25	250	8.26	1.37
341	7.34		0.93	300	7.74	1.17
387	7.09		0.87	400	7.01	0.85
433	6.84		0.75	500	6.15	0.65
480	6.34		0.70	600	(5.56)	
582	5.65		0.43			

80.60 BLACK DOUGLAS; April 10, 1951; 0854 GCT; 34°09'N, 121°09'W; sounding, 1250 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, missing.

0	13.50		5.84	0	13.50	5.84
10	13.50	32.99	6.01	10	13.50	6.01
25	13.48		5.83	20	13.48	5.94
49	11.86		5.61	30	13.45	5.78
72	10.14		5.11	50	11.86	5.61
97	9.58		4.38	75	10.05	5.00
147	8.54		3.24	100	9.51	4.30
193	7.87		2.69	150	8.46	3.19
287	6.90		1.73	200	7.77	2.62
385	6.59		1.05	250	7.20	2.11
478	6.01		0.67	300	6.82	1.62
577	5.47		0.42	400	6.53	0.98
770	4.68		0.41	500	5.87	0.59
963	4.06		0.80	600	5.35	0.41
1164	3.56		0.89	700	4.94	0.41
				800	4.58	0.44
				1000	3.94	0.85

80.70 BLACK DOUGLAS; April 10, 1951; 1455 GCT; 33°49'N, 121°51'W; sounding, 2010 fm; wind, 310°, force 2; weather, overcast; sea, very rough; wire angle, 00°.

0	13.78		6.03	0	13.78	6.03
10	13.78	33.06	6.38	10	13.78	6.38
25	13.21		6.56	20	13.73	6.52
50	12.28		5.38	30	12.96	6.56
74	10.37		4.88	50	12.28	5.38
99	9.42		4.93	75	10.37	4.89
152	8.51		3.54	100	9.38	4.93
199	8.00		2.54	150	8.54	3.61
295	6.92		2.84u	200	7.97	2.53
395	5.96		1.27	250	7.39	
490	5.30		0.75	300	6.87	
590	4.72		0.70	400	5.91	1.24
785	4.21		0.47	500	5.23	0.73
976	3.85		0.70	600	4.68	0.69
1179	3.44		0.96	700	4.40	0.56
				800	4.18	0.47
				1000	3.78	0.75

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 10, 1951; 2348 GCT; 33°29'N, 122°32'W; sounding, 2240 fm; wind, 290°, force 3; weather, overcast; sea, rough; wire angle, 18°. 80.80

0	14.18		5.84	0	14.18	5.84
10	14.14	33.03	5.87	10	14.14	5.87
24	14.06		5.82	20	14.08	5.84
47	14.12		5.82	30	14.07	5.82
72	14.14		5.87	50	14.14	5.82
95	12.15		5.79	75	14.12	5.87
145	8.95		4.44	100	11.59	5.74
191	8.48		3.68	150	8.87	4.31
278	7.30		2.46	200	8.37	3.54
370	6.17		1.49	250	7.69	2.85
460	5.50		0.85	300	7.01	2.18
554	4.98		0.63	400	5.90	1.26
739	4.40		0.49	500	5.27	0.73
924	4.02		0.72	600	4.79	0.55
1120	3.56		0.83	700	4.49	0.49
				800	4.26	0.56
				1000	3.86	0.78

BLACK DOUGLAS; April 11, 1951; 0602 GCT; 33°09'N, 123°13'W; sounding, 2340 fm; wind, 270°, force 3; weather, overcast; sea, rough; wire angle, 05°. 80.90

0	14.16		4.92	0	14.16	4.92
10	14.14	33.06	4.53	10	14.14	4.53
25	14.12		5.17	20	14.12	5.14
50	14.04		5.24	30	14.09	5.17
75	14.14		5.49	50	14.04	5.24
100	11.54		4.88	75	14.14	5.49
153	9.27		3.83	100	11.54	4.88
200	8.46		3.21	150	9.35	3.88
391	6.22		1.35	200	8.46	3.21
486	5.34		0.77	250	7.78	2.73
583	4.88		0.52	300	7.19	2.24
778	4.31		0.37	400	6.12	1.28
969	3.82		0.66	500	5.25	0.72
1173	3.37		0.86	600	4.82	0.49
				700	4.50	0.40
				800	4.25	0.38
				1000	3.73	0.71

BLACK DOUGLAS; April 11, 1951; 1206 GCT; 32°49'N, 123°54'W; sounding, 2420 fm; wind, 280°, force 3; weather, overcast; sea, rough; wire angle, 00°. 80.100

0	13.64		5.88	0	13.64	5.88
10	13.64	32.90	5.88	10	13.64	5.88
25	13.57a)		5.94	20	13.60	5.91
51	13.22		5.90	30	13.53	5.94
75	12.14		5.92	50	13.24	5.90
99	9.89		5.42	75	12.14	5.92
152	8.82		3.43	100	9.88	5.41
198	8.18		2.89	150	8.85	3.50
283	6.84		1.82	200	8.12	2.86
392	6.06		1.08	250	7.28	2.24
486	5.42		0.85	300	6.69	1.68
586	4.98		0.54	400	6.00	1.05
781	4.22		0.50	500	5.34	0.82
974	3.68		0.84	600	4.92	0.54
1177	3.30		0.96	700	4.55	0.50
				800	4.15	0.52
				1000	3.63	0.86

a) Alternate value, 13.45°C, not used in interpolation.

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

80.110

BLACK DOUGLAS; April 11, 1951; 1751 GCT; 32°29'N, 124°34.5'W; sounding, 2510 fm; wind, 280°, force 2; weather, cloudy; sea, rough; wire angle, 07°.

0	13.99		4.98	0	13.99	4.98
10	13.94	33.10	4.45	10	13.94	4.45
25	13.19		4.62	20	13.40	4.58
51	12.86		4.71	30	13.12	4.64
75	12.27		4.96	50	12.87	4.70
99	10.46		4.24	75	12.27	4.96
151	8.90		3.63	100	10.44	4.23
198	8.18		2.59	150	8.93	3.65
292	6.92		1.76	200	8.15	2.56
390	6.08		1.08	250	7.40	2.10
484	5.47		0.53	300	6.85	1.70
582	4.94		0.47	400	6.01	1.00
776	4.23		0.58	500	5.37	0.51
967	3.69		0.57	600	4.86	0.48
1169	3.28		0.79	700	4.48	0.52
				800	4.15	0.57
				1000	3.60	0.58

80.120

BLACK DOUGLAS; April 11, 1951; 2355 GCT; 32°09'N, 125°15.5'W; sounding, 2400 fm; wind, 300°, force 2; weather, partly cloudy; sea, rough; wire angle, 03°.

0	14.27		5.84	0	14.27	5.84
10	14.04	33.03	5.85	10	14.04	5.85
25	13.86		5.88	20	13.91	5.86
50	13.49		5.92	30	13.80	5.88
76	12.94		5.98	50	13.49	5.92
99	11.50		5.68	75	12.96	5.96
151	9.20		4.61	100	11.49	5.68
198	8.32		3.40	150	9.23	4.64
291	6.91		2.61	200	8.27	3.36
389	6.07		1.20	250	7.53	2.89
483	5.44		0.86	300	6.79	2.54
582	5.05		0.41	400	6.00	1.15
777	4.30		0.34	500	5.35	0.81
971	3.77		0.69	600	4.98	0.40
1176	3.28		0.88	700	4.60	0.37
				800	4.21	0.35
				1000	3.70	0.73

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 12, 1951; 0459, 0836 GCT; 31°49'N, 125°56'W; sounding, 2310 fm; wind, calm; weather, clear; sea, rough; wire angle, 11°, 00°. 80.130

0	14.40		5.88	0	14.40	5.88
10	13.78	32.97	5.89	10	13.78	5.89
24	13.54		5.93	20	13.57	5.92
50	13.34		5.97	30	13.47	5.95
74	12.13		5.92	50	13.34	5.97
99	10.70		5.56	75	12.10	5.90
152	8.87		4.10u	100	10.65	5.51
200	8.24		4.09	150	8.95	
294	7.02		3.10	200	8.24	4.09
392	6.01		2.22	250	7.57	3.54
486	5.32		1.34	300	6.96	3.04
585	5.03		0.53	400	5.94	2.14
779	4.37		0.44	500	5.25	1.20
974	3.77		0.80	600	4.98	0.51
1178	3.32		1.06	700	4.61	0.46
				800	4.30	0.45
617a)	4.92		0.50	1000	3.70	0.90
993	3.72b)		0.88	1200	3.26	1.10
1182	3.30		1.09	1500	2.68	1.53
1468	2.74		1.51	2000	2.04	1.90
1708	2.32		1.56	2500	1.75	2.30
1947	2.09		1.87	3000	(1.57)	
2192	1.89		1.92			
2436	1.78		2.26			
2685	1.67		2.33			
2935	1.59		2.06			

BLACK DOUGLAS; April 14, 1951; 1350 GCT; 33°44'N, 120°24.5'W; sounding, 600 fm; wind, 320°, force 6; weather, overcast; sea, very rough; wire angle, 21°. 83.55

0	12.41		6.01	0	12.41	6.01
10	12.38		6.00	10	12.38	6.00
23	12.43		5.91	20	12.43	5.93
46	10.80		5.17	30	12.34	5.70
68	10.29		4.82	50	10.69	5.11
89	9.34		3.55	75	10.10	4.40
136	9.05		3.53u	100	9.23	
179	8.60		1.93	150	8.93	
264	7.76		1.47	200	8.37	1.76
357	6.89		0.96	250	7.89	1.52
444	6.33		0.63	300	7.42	1.27
537	5.87		0.60	400	6.59	0.78
626	5.46		0.34	500	6.04	0.61
723	5.02		0.44	600	5.57	0.38
916	4.18		0.60	700	5.13	0.40
				800	4.69	0.53
				1000	(3.87)	

a) Overlapping casts; reconciliation of property curves when necessary.
b) Mean value of 3.68 and 3.75°C.

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

83.60

BLACK DOUGLAS; April 14, 1951; 0843 GCT; 33°34'N, 120°45'W; sounding, 790 fm; wind, 320°, force 6; weather, overcast; sea, very rough; wire angle, 15°.

0	12.3		-	0	12.3	
10	12.33	33.24	5.32	10	12.33	5.32
48	10.54		4.85	20	12.30	5.27
72	9.63		3.67	30	12.26	5.18
97	9.32		3.11	50	10.37	4.72
149	8.36		2.36	75	9.57	3.53
196	7.96		2.02	100	9.27	3.07
288	6.96		1.35	150	8.35	2.36
				200	7.92	1.99
				250	7.35	1.62
				300	(6.87)	

83.70

BLACK DOUGLAS; April 13, 1951; 1835, 2048 GCT; 33°14.5'N, 121°26'W; sounding, 2100 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 12°, 19°.

0	13.68		5.32	0	13.68	5.32
10	13.69	32.95	5.26	10	13.69	5.26
25	13.11u		5.65	20	13.68	5.64
49	13.64		5.34	30	13.66	5.64
73	11.66		-	50	13.64	5.33
97	10.58		4.42	75	11.30	4.83
149	8.90		3.11	100	10.44	4.33
195	8.12		1.80	150	8.89	3.10
283	7.18		1.50	200	8.04	1.77
375	6.51		0.75	250	7.49	1.57
463	5.86		0.47	300	7.05	1.40
556	5.28		0.22	400	6.33	0.65
740	4.68		0.40	500	5.63	0.33
926	4.14		0.35	600	5.16	0.23
1127	3.54		0.67	700	4.82	0.35
				800	4.52	0.41
949a)	4.03		0.60	1000	3.85	0.60
1131	3.50		0.80	1200	3.37	0.85
1402	3.03		1.12	1500	2.85	1.21
1630	2.66		1.32	2000	2.14	1.80
1863	2.29		1.59	2500	1.81	2.39
2099	2.06		1.94			
2336	1.90		2.21			
2581	1.78		2.48			
2829	1.70		2.59			

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 13, 1951; 1212 GCT; 32°54.5'N, 122°07.5'W; sounding, 2300 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 23°. 83.80

0	13.97		5.68	0	13.97	5.68
10	13.98	33.04	5.52	10	13.98	5.52
23	13.98		5.39	20	13.98	5.42
47	13.92		5.56	30	13.97	5.43
70	13.24		5.56	50	13.79	5.56
93	11.51		5.49	75	12.97	5.55
143	9.18		3.78	100	11.06	5.42
187	8.54		3.03	150	9.03	3.61
274	7.20		2.35	200	8.37	2.90
367	6.44		1.76	250	7.59	2.50
456	5.93		0.81	300	6.91	2.18
547	5.56		0.44	400	6.24	1.36
735	4.82		0.34	500	5.74	0.61
920	4.24		0.54	600	5.35	0.40
1123	3.68		0.78	700	4.94	0.35
				800	4.58	0.39
				1000	4.01	0.66

BLACK DOUGLAS; April 13, 1951; 0540 GCT; 32°34.5'N, 122°48'W; sounding, 2360 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 22°. 83.90

0	14.39		5.71	0	14.39	5.71
10	14.38	33.13	5.71	10	14.38	5.71
23	14.38		5.67	20	14.38	5.68
47	14.34		5.72	30	14.36	5.68
69	14.32		5.71	50	14.34	5.72
91	12.96		5.62	75	14.26	5.70
137	10.04		4.92	100	11.77	5.54
180	8.96		3.69	150	9.66	4.54
264	7.61		2.94	200	8.57	3.42
353	7.15		1.10	250	7.76	3.05
438	6.47		0.67	300	7.37	2.24
528	6.02		0.41	400	6.82	0.84
706	5.08		0.34	500	6.13	0.45
884	4.20		0.70	600	5.66	0.35
1076	3.80		0.90	700	5.11	0.34
				800	4.57	0.49
				1000	3.93	0.85

BLACK DOUGLAS; April 15, 1951; 0035 GCT; 33°50'N, 118°37.5'W; sounding, 300 fm; wind, 240°, force 1; weather, cloudy; sea, slight; wire angle, 07°. 87.35

0	15.06		4.86u	0	15.06	
10	13.92	33.41	5.87	10	13.92	5.87
25	13.36		4.38	20	13.50	4.70
50	11.00		3.52	30	13.00	4.24
75	9.72		2.75u	50	11.00	3.52
99	9.31		2.76	75	9.72	
				100	(9.27)	

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

87.40 BLACK DOUGLAS; April 15, 1951; 0434 GCT; 33°40'N, 118°58.5'W; sounding, 410 fm; wind, calm; weather, overcast; sea, slight; wire angle, 04°.

0	14.49		6.11	0	14.49	6.11
10	14.31	33.31	6.16	10	14.31	6.16
25	14.00		6.22	20	14.10	6.20
50	11.68		5.45	30	13.80	6.21
74	10.31		4.37	50	11.68	5.45
98	9.76		3.72	75	10.30	4.35
151	8.80		2.80	100	9.68	3.70
196	8.39		1.91	150	8.80	2.84
242	8.00		1.34	200	8.35	1.86
288	7.59		1.08	250	7.93	1.28
338	7.09		0.84	300	7.47	1.03
385	6.78		1.06u	400	6.71	
430	6.62		0.65	500	6.25	0.46
480	6.38		0.50	600	(5.75)	
580	5.84		0.40			

87.50 BLACK DOUGLAS; April 15, 1951; 1012 GCT; 33°20'N, 119°39.5'W; sounding, 42 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, missing.

0	13.03		4.74	0	13.03	4.74
10	13.07	33.39	4.30	10	13.07	4.30
25	11.38		4.40	20	12.35	4.39
50	10.13		2.89	30	10.99	4.38
				50	10.13	2.89

87.60 BLACK DOUGLAS; April 15, 1951; 1549 GCT; 33°00'N, 120°21.5'W; sounding, 380 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 05°.

0	14.08		5.78	0	14.08	5.78
10	14.06		5.89	10	14.06	5.89
25	13.82		5.82	20	14.00	5.87
50	11.63		5.62	30	13.15	5.80
75	10.25		4.85	50	11.63	5.62
99	9.72		4.24	75	10.25	4.85
152	8.76		3.17	100	9.69	4.21
199	8.15		2.38	150	8.80	3.21
246	7.78		2.59u	200	8.15	2.37
294	7.36		1.74	250	7.74	
346	6.96		1.10	300	7.33	1.66
395	6.54		0.74	400	6.52	0.72
444	6.41		0.59	500	(6.10)	(0.57)
493	6.16		0.57			

87.70 BLACK DOUGLAS; April 15, 1951; 2156 GCT; 32°39.5'N, 121°02'W; sounding, 1980 fm; wind, 350°, force 2; weather, overcast; sea, rough; wire angle, 04°.

0	14.2		4.92	0	14.2	4.92
10	14.22	33.17	4.48	10	14.22	4.48
25	14.19		3.49u	20	14.20	
49	14.20		4.57	30	14.19	
74	12.31		4.62	50	14.18	4.56
99	10.68		4.14	75	12.30	4.61
151	9.02		3.09	100	10.64	4.14
198	8.20		2.39	150	9.06	3.10
292	6.88		1.26	200	8.16	2.36
391	6.30		0.83	250	7.44	1.63
486	5.54		0.52	300	6.80	1.21
586	5.38		0.33	400	6.24	0.80
780	4.6 a)		0.36	500	5.48	0.49
974	4.06		0.39	600	5.36	0.33
1176	3.53		0.60	700	4.99	0.35
				800	4.51	0.36
				1000	3.95	0.40

a) Temperature inferred from pressure thermometer and wire depth.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; April 16, 1951; 0337, 0425 GCT; 32°19.5'N, 121°43'W; sounding, 2280 fm; wind, 350°, force 1; weather, overcast; sea, slight; wire angle, 17°, 14°. 87.80

0	14.1		5.88	0	14.1	5.88
10	14.10		5.86	10	14.10	5.86
24	14.07		5.83	20	14.08	5.84
48	13.86		5.90	30	14.02	5.84
				50	13.8	5.88
73	11.1		5.58	75	11.0	5.53
97	9.86		4.54	100	9.75	4.41
145	8.68		3.28	150	8.60	3.16
189	8.10		2.59	200	7.98	2.45
276	7.16		1.78	250	7.44	1.98
368	6.25		0.97	300	6.90	1.54
455	5.93		0.90	400	6.07	0.93
549	5.51		0.52	500	5.75	0.72
733	4.77		0.38	600	5.27	0.46
921	4.16		0.55	700	4.88	0.39
1121	3.62		0.83	800	4.56	0.40
				1000	3.92	0.64

BLACK DOUGLAS; April 16, 1951; 0927 GCT; 31°59'N, 122°24'W; sounding, 2360 fm; wind, 280°, force 1; weather, overcast; sea, slight; wire angle, 00°. 87.90

0	13.70		5.94	0	13.70	5.94
10	13.62	33.19	5.91	10	13.62	5.91
25	13.56		5.95	20	13.60	5.93
50	12.86		5.44a)	30	13.49	5.95
75	11.2		5.48	50	12.86	5.44
100	9.81		4.38	75	11.2	5.48
153	8.88		3.18	100	9.81	4.38
200	8.12		2.66	150	8.92	3.23
293	7.24		1.44	200	8.12	2.66
391	6.37		0.88	250	7.60	2.00
485	5.96		0.56	300	7.17	1.38
584	5.48		0.36	400	6.30	0.83
778	4.66		0.41	500	5.89	0.52
972	3.94		0.56	600	5.38	0.36
1175	3.52		0.85	700	4.96	0.41
				800	4.58	0.41
				1000	3.85	0.58

BLACK DOUGLAS; April 16, 1951; 1043 GCT;[b] 31°59'N, 122°24'W; sounding, 2360 fm; wind, 280°, force 1; weather, overcast; sea, slight; wire angle, 00°. 87.90

666	5.15	34.31	0.18
691	4.96	34.33	0.32
714	4.88	34.35	0.40
738	4.80	34.36	0.40
763	4.67	34.42	0.47
786	4.66	34.36	0.63
810	4.54	-	0.39
833	4.36	34.41	0.37
859	4.31	34.40	0.40
882	4.22	34.43	0.40
906	4.12	34.43	0.41
930	4.05	34.36	0.41
956	3.96	34.43	0.61
979	3.86	34.45	0.59
1005	3.80	34.47	0.57

a) Alternate value, 5.32 ml/L, not used in interpolation.
b) Test cast.

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	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.30	CREST; April 17, 1951; 2302 GCT; 33°24.5'N, 117°55'W; sounding, 325 fm; wind, calm; weather, overcast; sea, slight; wire angle, 10°.								
	0	15.84				0	15.84		
	10	15.10	33.31			10	15.10		
	25	15.14				20	15.13		
	49	11.40				30	15.14		
	72	10.17				50	11.30		
	95	9.48				75	10.05		
	145	9.11				100	9.42		
	190	8.34				150	9.06		
	235	7.98				200	8.23		
	282	7.77				250	7.90		
	333	7.42				300	7.64		
	380	7.16				400	6.99		
	433	6.64				500	(6.21)		
	477	6.35							
90.37	CREST; April 17, 1951; 1856 GCT; 33°11'N, 118°23.5'W; sounding, 640 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 06°.								
	0	15.16		5.54	0.58	0	15.16	5.54	0.58
	10	14.99	33.24	5.61	0.57	10	14.99	5.61	0.57
	25	13.08		6.02	0.64	20	14.40	5.99	0.60
	49	10.68		4.50	1.33	30	12.25	6.01	0.80
	74	9.93		3.63	1.64	50	10.65	4.38	1.36
	98	9.44		3.23	1.97	75	9.92	3.61	1.66
	149	8.71		2.70	2.15	100	9.40	3.21	1.99
	198	8.04		2.44	-	150	8.71	2.69	(2.16)
	291	7.39		1.10u	-	200	8.01	(2.43)	(2.38)
	390	6.88		1.12	3.06	250	7.63	(2.13)	(2.66)
	483	6.31		0.42	3.18	300	7.35	(1.78)	(2.86)
	579	5.70		0.39	3.27	400	6.83	1.03	3.07
	776	4.80		0.48	3.35	500	6.22	0.40	3.19
	968	4.27		0.45	3.31	600	5.59	0.40	3.28
	1170	4.09		0.59	3.60u	700	5.13	0.45	3.33
						800	4.72	0.48	3.35
						1000	4.20	0.45	
90.45	CREST; April 17, 1951; 1400, 1420 GCT; 32°53.5'N, 118°54.5'W; sounding, 940 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 00°, 00°.								
	0	14.16		-	0.58	0	14.16		0.58
	10	13.78	33.37	5.53	0.59	10	13.78	5.53	0.59
	25	12.65		5.21	0.85	20	13.10	5.32	0.67
	50	10.32		4.09	1.56	30	12.05	5.00	1.05
	74	9.38		2.83	1.91	50	10.32	4.09	1.56
	98	8.98		2.43	2.08	75	9.38	2.82	1.92
						100	8.96	2.43	2.09
	152	8.49		2.15	2.23	150	8.52	2.16	2.22
	199	8.20		1.66	2.49	200	8.20	1.65	2.49
	295	7.16		1.13	2.71	250	7.63	1.36	2.63
	394	6.60		0.70	2.83	300	7.13	1.11	2.72
	489	6.12		0.39	2.99	400	6.56	0.68	2.84
	589	5.62		0.31	3.10	500	6.07	0.37	3.00
	785	4.70		0.34	3.12	600	5.57	0.31	3.10
	977	4.15		0.46	3.13	700	5.10	0.34	3.12
	1177	3.88		0.50	3.50u	800	4.64	0.35	3.12
						1000	4.10	0.46	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; April 17, 1951; 0809, 0827 GCT; 32°38'N, 119°27.5'W; sounding, 720 fm; wind, 320°, force 1; weather, overcast; sea, slight; wire angle, 08°, 13°. 90.53

0	13.70		5.69	0.64	0	13.70	5.69	0.64
10	13.74	33.17	5.83	0.62	10	13.74	5.83	0.62
25	13.48		5.78	0.65	20	13.64	5.80	0.64
49	11.96		5.67	0.99	30	13.50	5.75	0.69
72	10.30		5.01	1.30	50	11.96	5.66	1.00
99	10.08		4.43	1.42	75	10.26	4.94	1.32
					100	10.08	4.41	1.42
149	8.96		3.69	1.81	150	8.93	3.67	1.82
195	8.39		2.69	2.17	200	8.33	2.63	2.20
287	7.76		1.31	2.65	250	7.98	1.77	2.50
385	6.95		0.90	2.85	300	7.66	1.24	2.68
476	6.36		0.53	3.01	400	6.84	0.84	2.88
572	5.78		0.43	3.10	500	6.22	0.47	3.04
761	4.90		0.46	3.11	600	5.64	0.43	3.10
949	4.17		0.51	3.09	700	5.15	0.45	3.11
1147	4.00		0.66	3.07	800	4.72	0.46	3.11
					1000	4.08	0.53	3.08

CREST; April 17, 1951; 0254 GCT; 32°24'N, 119°56'W; sounding, 420 fm; wind, calm; weather, overcast; sea, slight; wire angle, 11°. 90.60

0	15.18		5.32	0.53	0	15.18	5.32	0.53
10	15.13	33.21	5.55	0.54	10	15.13	5.55	0.54
25	15.09		5.50	0.55	20	15.11	5.52	0.55
49	15.08		5.43	0.55	30	15.09	5.48	0.55
72	13.63		5.51	0.67	50	15.08	5.43	0.55
96	12.33		5.32	0.87	75	13.42	5.51	0.70
146	9.60		3.93	1.60	100	12.13	5.25	0.91
192	8.74		3.28	1.94	150	9.52	3.85	1.64
239	7.94		2.92	2.07	200	8.60	3.21	1.96
284	7.36		2.15	2.31	250	7.80	2.76	2.12
334	6.55		1.59	2.64	300	7.08	1.95	2.42
379	6.25		1.18	2.84	400	6.18	1.03	2.85
471	6.08		0.71	2.87	500	6.05	0.62	2.91
568	5.85		0.43	3.03	600	5.65	0.40	3.02
668	5.14		0.40	3.02				

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.70	CREST; April 16, 1951; 2039, 2200 GCT; 32°04'N, 120°39'W; sounding, 2100 fm; wind, calm; weather, overcast; sea, slight; wire angle, 00°, 05°.							
0	14.94		4.82u	0.59	0	14.94		0.59
10	14.81	33.10	5.48	0.63	10	14.81	5.48	0.63
25	14.79		5.57	0.68	20	14.80	5.53	0.67
50	13.19		5.90	0.70	30	14.63	5.65	0.69
75	10.62		5.13	1.21	50	13.19	5.90	0.70
100	9.78		4.36	1.52	75	10.62	5.13	1.21
152	8.92		3.28	-	100	9.78	4.36	1.52
200	8.30		2.74	1.98	150	8.95	3.29	1.79
295	7.04		1.23	2.59	200	8.30	2.74	1.98
396	6.26		1.03	2.96	250	7.64	1.85	2.28
492	5.50		0.66	3.08	300	6.98	1.20	2.61
591	5.13		0.43	3.22	400	6.24	1.02	2.97
788	4.56		0.41	3.44	500	5.48	0.64	3.09
978	3.99		0.59	3.13	600	5.10	0.43	3.24
1175	3.50		0.68	3.07	700	4.80	0.41	3.37
					800	4.54	0.41	3.43
597a)	5.13		0.39	3.11	1000	3.90	0.60	
991	3.94		0.61	3.14	1200	3.46	0.73	3.08
1186	3.51		0.74u	3.11	1500	2.75	1.20	2.98
1485	2.78		1.19	2.99	2000	2.05	1.87	2.77
1730	2.36		1.85r	2.86	2500	1.79	2.31	2.68
1980	2.06		1.59r	2.78	3000	1.62	2.66	2.56
2229	1.89		2.09	2.71				
2480	1.79		2.28	2.68				
2737	1.69		1.79r	2.64				
3029	1.62		2.68	2.55				
90.80	CREST; April 16, 1951; 1620 GCT; 31°44'N, 121°18'W; sounding, 2050 fm; wind, 220°, force 1; weather, overcast; sea, moderate; wire angle, 08°.							
0	14.51		5.25	0.59	0	14.51	5.25	0.59
10	14.53	33.09	5.47	0.59	10	14.53	5.47	0.59
25	14.51		5.54	0.60	20	14.52	5.51	0.60
49	14.13		5.55	0.61	30	14.47	5.54	0.60
73	12.54		5.48	0.75	50	14.09	5.54	0.61
97	10.57		5.01	1.17	75	12.15	5.46	0.77
152	9.12		3.66	1.68	100	10.42	4.92	1.20
196	8.35		3.07	1.87	150	9.17	3.73	1.66
290	7.06		2.17	2.15	200	8.28	3.02	1.89
388	6.12		1.31	-	250	7.59	2.54	2.03
482	5.80		0.53	2.95	300	6.95	2.10	2.18
580	4.90		0.52	3.05	400	6.05	1.18	2.52
771	4.26		0.53	3.07	500	5.71	0.52	2.98
961	3.91		0.73	3.03	600	4.81	0.52	3.05
1161	3.40		0.90	3.00	700	4.47	0.52	3.06
					800	4.20	0.55	3.07
					1000	3.81	0.78	3.01

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

90.90

CREST; April 16, 1951; 1051 GCT; 31°24'N, 121°59'W; sounding, 2300 fm; wind, 320°, force 1; weather, overcast; sea, moderate; wire angle, 17°.

0	14.13		5.16	0.52	0	14.13	5.16	0.52
10	14.13	33.37	5.33	0.54	10	14.13	5.33	0.54
23	13.92		5.40	0.55	20	14.03	5.40	0.54
47	13.44		5.33	0.58	30	13.77	5.39	0.56
70	11.78		5.13	0.88	50	13.31	5.30	0.60
92	10.38		4.70	1.17	75	11.37	5.05	0.96
140	8.84		3.38	1.78	100	10.05	4.53	1.28
183	8.44		2.88	1.92	150	8.70	3.23	1.83
269	7.32		2.19	2.29	200	8.28	2.74	1.98
360	6.24		1.29	2.72	250	7.57	2.34	2.20
448	5.70		0.70	2.96	300	6.93	1.89	2.44
540	5.21		0.42	3.06	400	5.95	1.03	2.84
724	4.58		0.34	3.15	500	5.43	0.50	3.03
909	4.02		0.57	3.05	600	4.98	0.37	3.10
1107	3.44		0.73	3.04	700	4.65	0.35	3.14
					800	4.34	0.42	3.12
					1000	3.73	0.66	3.04

90.100

CREST; April 16, 1951; 0533 GCT; 31°04.5'N, 122°40'W; sounding, 2250 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 09°.

0	14.80		4.31	0.61	0	14.80	4.31	0.61
10	14.78	33.15	4.29	0.58	10	14.78	4.29	0.58
25	14.75		4.65	0.57	20	14.76	4.61	0.57
50	14.83		4.69	0.57	30	14.75	4.67	0.57
75	15.10		4.57	0.57	50	14.83	4.69	0.57
97	14.10		4.30	0.63	75	15.10	4.57	0.57
152	10.44		3.44	1.29	100	13.74	4.25	0.63
197	8.96		3.13	1.61	150	10.50	3.49	1.28
290	7.49		1.91	2.26	200	8.86	3.09	1.64
389	6.11		1.03	2.63	250	8.05	2.50	2.00
481	5.47		0.64	2.82	300	7.35	1.79	2.31
581	5.07		0.36	2.97	400	6.01	0.99	2.65
774	4.41		0.31	2.98	500	5.38	0.56	2.85
960	3.81		0.52	2.96	600	5.00	0.35	2.98
1155	3.32		0.72	2.98	700	4.66	0.31	2.98
					800	4.31	0.32	2.98
					1000	3.69	0.57	2.96

90.110

CREST; April 15, 1951; 2218 GCT; 30°45.5'N, 123°25.5'W; sounding, 2230 fm; wind, calm; weather, overcast; sea, rough; wire angle, 10°.

0	16.28		4.99	0.51	0	16.28	4.99	0.51
10	16.07	33.06	5.18	0.49	10	16.07	5.18	0.49
25	16.07		5.13	0.53	20	16.07	5.15	0.51
49	16.06		5.05	0.55	30	16.06	5.10	0.54
73	16.06		5.15	0.57	50	16.06	5.05	0.56
97	15.93		5.12	0.59	75	16.06	5.15	0.57
					100	(15.93)	(5.12)	(0.59)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

90.110 CREST; April 15, 1951; 2339 GCT;[a] 30°45.5'N, 123°25.5'W; sounding, 2230 fm; wind, calm; weather, overcast; sea, rough; wire angle, 10°.

655	4.92							
683	4.83	34.34						
707	4.75							
733	4.69							
758	4.58							
781	4.44							
806	4.40							
831	4.30							
854	4.26							
879	4.18							
904	4.11							
929	4.04							
955	3.94							
979	3.88							
1003	3.82							

90.120 CREST; April 15, 1951; 1525, 1706 GCT; 30°25'N, 124°04.5'W; sounding, 2500 fm; wind, 310°, force 1; weather, overcast; sea, moderate; wire angle, 14°, 12°.

0	15.34		5.09	0.50	0	15.34	5.09	0.50
10	15.37	33.31	4.93	0.50	10	15.37	4.93	0.50
24	15.37		5.12	0.56	20	15.37	5.11	0.55
48	15.51		4.87	0.53	30	15.42	5.11	0.56
74	15.42		4.77	0.52	50	15.51	4.86	0.53
98	13.64		5.21	0.66	75	15.42	4.78	0.52
148	10.40		4.49	1.23	100	13.55	5.21	0.67
195	9.24		3.64	1.84	150	10.35	4.45	1.24
286	7.56		2.77	2.30	200	9.14	3.58	1.88
382	6.51		1.41	2.82	250	8.18	3.08	2.16
473	5.80		0.83	3.04	300	7.37	2.61	2.36
569	5.36		0.43	3.19	400	6.36	1.25	2.88
757	4.56		0.39	3.32	500	5.65	0.69	3.09
939	3.90		0.53	3.40	600	5.20	0.38	3.15
1136	3.44		0.78	3.29	700	4.78	0.38	3.26
					800	4.41	0.40	3.34
629b)	5.08		0.37	3.09	1000	3.77	0.68	3.36
1048	3.66		0.74	3.15u	1200	3.32	0.83	
1256	3.22		0.94	3.13u	1500	2.77	1.19	3.09
1568	2.64		1.29	3.06	2000	2.14	1.80	2.90
1829	2.32		1.56	2.96	2500	1.83	2.21	2.83
2091	2.06		1.90	2.87	3000	1.62	2.39	2.75
2351	1.90		2.13	2.85				
2613	1.76		2.26	2.81				
2897	1.65		2.34	-				
3233	1.57		2.57	2.75				

a) Test cast.
b) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; April 9, 1951; 0835 GCT; 32°50'N, 117°31.5'W; sounding, 480 fm; wind, calm; weather, fog; sea, moderate; wire angle, 03°.								93.30
0	14.96		5.25	0.54	0	14.96	5.25	0.54
10	14.99	33.28	5.48	0.55	10	14.99	5.48	0.55
25	14.76		5.52	0.56	20	14.85	5.52	0.56
50	12.62		5.34	0.73	30	14.35	5.51	0.58
75	10.18		4.23	1.40	50	12.62	5.34	0.73
99	9.60		3.53	1.60	75	10.18	4.23	1.40
152	8.96		2.63	1.98	100	9.60	3.53	1.61
199	8.56		1.92	2.28	150	8.97	2.65	1.97
247	8.54		1.13	2.58	200	8.56	1.92	2.29
294	8.01		0.85	2.65	250	8.54	1.11	2.58
393	7.14		0.55	2.74r	300	7.94	0.83	2.66
487	6.28		0.65	2.99	400	7.07	0.55	2.76
587	5.70		0.33	3.06	500	6.19	0.63	3.00
682	5.18		0.34	3.10	600	5.63	0.34	3.06
					700	(5.09)		
CREST; April 9, 1951; 1424, 1445 GCT; 32°30'N, 118°12.5'W; sounding, 950 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 03°, missing.								93.40
0	14.81		4.27u	0.61	0	14.81		0.61
10	14.80		4.74u	0.57	10	14.80		0.57
25	14.29		4.31u	0.66	20	14.68		0.61
49	11.80		4.76	-	30	13.77		0.70
73	10.47		3.56	1.44	50	11.80	4.75	0.88
96	9.53		2.99	-	75	10.43	3.54	(1.48)
					100	9.45	2.97	(1.79)
155	8.74		2.76	1.87	150	8.80	2.78	(1.86)
201	8.33		2.27	-	200	8.33	2.27	2.09
294	7.36		1.15	2.64	250	7.76	1.70	2.37
392	6.70		0.66	2.94	300	7.31	1.10	2.67
486	6.17		0.51	3.12	400	6.65	0.64	2.96
584	5.61		0.34	3.22	500	6.08	0.48	3.13
777	4.68		0.33	3.30	600	5.52	0.35	3.23
965	4.06		0.49	3.24	700	5.02	0.34	3.28
1164	3.62		0.64	3.14	800	4.59	0.33	3.30
					1000	3.97	0.53	3.22
CREST; April 9, 1951; 2048 GCT; 32°10'N, 118°53'W; sounding, 760 fm; wind, 270°, force 4; weather, overcast; sea, moderate; wire angle, 15°.								93.50
0	15.42		5.61	0.64	0	15.42	5.61	0.64
10	13.17	33.44	5.81	0.79	10	13.17	5.81	0.79
22	12.47		5.80	1.00	20	12.55	5.80	0.98
48	10.62		4.46	1.55	30	11.91	5.75	1.19
72	9.94		3.86	1.74	50	10.57	4.36	1.57
94	9.35		3.26	1.96	75	9.87	3.82	1.74
146	8.68		2.35	2.30	100	9.25	3.14	2.01
192	8.00		1.91	2.60	150	8.62	2.31	2.32
284	7.06		1.45	2.90	200	7.90	1.86	2.64
381	6.34		0.94	-	250	7.39	1.65	2.82
472	6.29		0.44	3.30	300	6.91	1.39	2.94
567	5.82		0.35	3.43	400	6.33	0.82	3.16
757	4.88		0.35	3.57	500	6.20	0.40	3.34
939	4.18		0.51	3.52	600	5.64	0.35	3.46
1137	3.66		0.72	3.30	700	5.15	0.35	3.54
					800	4.70	0.37	3.57
					1000	3.99	0.57	3.46

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
93.60	CREST; April 10, 1951; 0229 GCT; 31°50'N, 119°34'W; sounding, 1850 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 17°.							
0	15.34		5.45	0.52	0	15.34	5.45	0.52
10	15.33	33.28	4.91	0.52	10	15.33	4.91	0.52
24	15.24		5.29	0.53	20	15.28	5.13	0.52
48	14.96		5.51	0.54	30	15.18	5.39	0.53
71	13.77		5.45	0.60	50	14.90	5.50	0.54
95	13.04		5.42	0.68	75	13.60	5.44	0.62
147	9.98		4.09	1.43	100	12.88	5.41	0.71
193	8.70		2.96	1.92	150	9.90	4.00	1.49
286	7.76		1.54	2.44	200	8.60	2.84	1.96
381	7.04		0.77	2.78	250	8.09	2.05	2.24
473	6.42		0.50	2.94	300	7.65	1.39	2.50
570	5.72		0.36	2.95	400	6.91	0.70	2.82
760	4.74		0.39	3.07	500	6.24	0.44	2.95
946	4.13		0.58	3.08	600	5.55	0.36	2.96
1145	3.54		0.74	-	700	5.02	0.38	3.03
					800	4.59	0.42	3.08
					1000	3.97	0.64	
93.70	CREST; April 10, 1951; 0810 GCT; 31°30'N, 120°15'W; sounding, 2150 fm; wind, 300°, force 4; weather, fog; sea, rough; wire angle, 11°.							
0	14.84		5.00	0.68	0	14.84	5.00	0.68
10	14.85	33.10	5.34	0.63	10	14.85	5.34	0.63
24	14.87		5.18	0.65	20	14.86	5.25	0.64
48	14.66		5.18	0.68	30	14.86	5.18	0.66
72	12.31		4.61	1.00	50	14.62	5.17	0.69
96	10.14		4.80u	1.38	75	11.90	4.53	1.06
147	9.06		3.46	2.00	100	10.03		1.42
193	8.30		3.16	2.30	150	9.02	3.45	2.03
287	7.10		2.20	2.54	200	8.22	3.11	2.32
385	6.18		1.07	3.10	250	7.55	2.64	2.44
481	5.50		0.68	3.23	300	6.98	2.05	2.59
581	5.05		0.35	3.44	400	6.07	0.98	3.13
772	4.40		0.43	3.56	500	5.40	0.62	3.26
960	3.91		0.63	3.56	600	4.98	0.35	3.46
1158	3.44		0.83	3.44	700	4.63	0.37	3.53
					800	4.31	0.45	3.56
					1000	3.80	0.66	3.54
93.80	CREST; April 10, 1951; 1426 GCT; 31°11'N, 120°56'W; sounding, 2190 fm; wind, 290°, force 2; weather, overcast; sea, rough; wire angle, 04°.							
0	14.76		5.05	0.58	0	14.76	5.05	0.58
10	14.79	33.10	5.16	0.58	10	14.79	5.16	0.58
25	14.80		5.23	0.56	20	14.80	5.22	0.57
50	14.40		5.29	0.60	30	14.80	5.26	0.56
73	14.20		5.16	0.62	50	14.40	5.29	0.60
98	13.24		5.09	0.74	75	14.19	5.15	0.62
148	9.76		4.17	1.59	100	12.85	5.08	0.78
194	8.71		3.07	2.06	150	9.72	4.14	1.61
284	7.46		1.96	2.60	200	8.63	3.00	2.11
380	6.21		1.26	2.99	250	7.91	2.34	2.42
472	5.82		0.63	3.18	300	7.25	1.83	2.68
569	5.32		0.40	-	400	6.10	1.11	3.03
756	4.40		0.36	3.35	500	5.71	0.53	(3.24)
945	3.97		0.55	3.68r	600	5.14	0.38	(3.36)
1144	3.45		0.76	3.29	700	4.64	0.36	(3.36)
					800	4.28	0.38	3.34
					1000	3.83	0.61	3.31

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; April 10, 1951; 1904 GCT; 30°51'N, 121°36'W; sounding, 2200 fm; wind, 290°, force 4; weather, cloudy; sea, moderate; wire angle, 12°.								93.90
0	15.48		5.39	0.53	0	15.48	5.39	0.53
10	15.46	33.30	5.47	0.56	10	15.46	5.47	0.56
25	15.36		5.44	0.58	20	15.39	5.45	0.58
49	15.36		5.32	0.59	30	15.36	5.39	0.58
74	15.02		5.47	0.62	50	15.36	5.32	0.59
98	13.17		5.54	0.75	75	15.01	5.47	0.62
149	10.34		4.72	1.34	100	13.05	5.54	0.76
196	8.75		3.47	1.98	150	10.34	4.70	1.35
286	7.54		2.14	2.46	200	8.69	3.38	2.02
381	6.19		1.31	2.89	250	7.99	2.58	2.31
473	5.85		0.67	3.17	300	7.34	2.03	2.51
568	5.03		0.37	3.26	400	6.10	1.18	2.96
758	4.44		0.37	3.38	500	5.70	0.54	3.21
946	3.90		0.48	3.40	600	4.90	0.37	3.28
1143	3.48		0.56	3.36	700	4.60	0.37	3.35
					800	4.32	0.37	3.39
					1000	3.76	0.51	3.40
CREST; April 12, 1951; 1234 GCT; 32°08.5'N, 117°17'W; sounding, 750 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 05°.								97.32
0	14.84		4.80	0.59	0	14.84	4.80	0.59
10	14.84	33.31	4.95	0.58	10	14.84	4.95	0.58
25	13.76		5.78u	0.63	20	14.65	4.84	0.60
50	11.38		3.94	1.16	30	13.07	4.51	0.72
74	10.02		3.08	1.74	50	11.38	3.94	1.16
98	9.66		2.57	1.96	75	10.00	3.08	1.75
151	9.12		1.59	2.26	100	9.62	2.56	1.96
197	8.71		1.59	2.44	150	9.13	1.60	2.25
291	8.25		0.70	2.91	200	8.68	1.57	2.46
390	7.00		-	3.08	250	8.43	1.05	2.71
485	6.38		0.41	3.15	300	8.18	0.65	2.93
676	5.26		0.34	3.30	400	6.93	0.48	3.09
777	4.71		0.34	3.28	500	6.28	0.39	3.16
973	4.16		0.48	3.29	600	5.67	0.35	3.24
					700	5.13	0.34	3.30
					800	4.62	0.39	3.28
					1000	(4.10)	(0.51)	(3.29)
CREST; April 12, 1951; 0646, 0703 GCT; 31°53'N, 117°49'W; sounding, 800 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 15°, 20°.								97.40
0	15.04		5.46	0.52	0	15.04	5.46	0.52
10	15.07	33.33	5.13	0.51	10	15.07	5.13	0.51
24	13.31		5.57	0.57	20	14.25	5.56	0.54
					30	12.45	5.54	0.66
48	10.54		4.09	1.47	50	10.48	4.00	1.52
71	9.93		3.24	1.80	75	9.83	3.15	1.84
92	9.54		2.91	1.92	100	9.43	2.83	1.96
141	9.08		2.47	2.12	150	9.02	2.37	2.17
186	8.73		1.85	2.37	200	8.63	1.67	2.45
275	8.09		1.00	2.77	250	8.27	1.19	2.71
369	6.96		0.74	2.90	300	7.77	0.89	2.81
458	6.66		0.44	3.03	400	6.83	0.68	2.93
553	6.09		0.29	3.11	500	6.43	0.36	3.07
741	4.87		0.31	3.17	600	5.75	0.30	3.13
928	4.23		0.47	3.15	700	5.10	0.31	3.16
1128	3.70		0.62	3.08	800	4.63	0.32	3.17
					1000	4.04	0.55	3.13

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
97.50	CREST; April 12, 1951; 0027, 0045 GCT; 31°34'N, 118°30'W; sounding, 1400 fm; wind, 360°, force 4; weather, overcast; sea, rough; wire angle, 23°, 30°.							
0	14.80		5.37	0.57	0	14.80	5.37	0.57
9	14.81	33.26	5.52	0.57	10	14.80	5.51	0.57
22	14.66		5.46	0.58	20	14.69	5.46	0.58
44	12.47		5.77	0.80	30	14.33	5.59	0.61
					50	12.06	5.65	0.89
64	11.31		4.93	1.11	75	10.64	4.45	1.30
84	10.26		4.17	1.45	100	9.93	3.76	1.68
127	9.50		3.12	1.96	150	9.25	2.71	2.07
167	9.12		2.42	2.15	200	8.74	2.21	2.24
246	8.12		2.00	2.38	250	8.08	1.93	2.39
330	7.50		0.92	2.77	300	7.69	1.32	2.64
410	6.76		0.58	2.94	400	6.86	0.62	2.93
664	5.20		0.40	3.14	500	6.15	0.48	3.04
839	4.42		0.55	3.13	600	5.59	0.42	3.12
1032	3.70		-	3.07	700	5.01	0.41	3.14
					800	4.58	0.50	3.14
					1000	3.80		3.09
97.60	CREST; April 11, 1951; 1835 GCT; 31°14'N, 119°10.5'W; sounding, 2000 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 18°.							
0	15.14		5.30	0.62	0	15.14	5.30	0.62
9	15.19	33.40	5.33	0.64	10	15.19	5.33	0.64
23	15.13		5.51	0.66	20	15.16	5.50	0.66
47	14.86		5.33	0.65	30	15.05	5.46	0.66
70	13.74		5.45	0.69	50	14.85	5.32	0.65
94	12.51		5.50	0.87	75	13.43	5.48	0.71
142	9.80		4.77	1.58	100	12.29	5.50	0.94
185	8.88		3.12	1.98	150	9.60	4.40	1.66
273	7.70		2.46	2.36	200	8.66	2.98	2.06
364	6.39		1.47	2.73	250	7.98	2.59	2.28
454	5.99		0.70	3.02	300	7.28	2.15	2.46
727	4.66		0.51	3.24	400	6.20	1.10	2.87
912	4.11		0.49	-	500	(5.78)	(0.64)	(3.07)
1110	3.62		1.52r	3.15	600	(5.28)	(0.55)	(3.16)
					700	(4.77)	(0.50)	(3.23)
					800	4.45	0.50	3.24
					1000	3.87		3.20
97.70	CREST; April 11, 1951; 1247 GCT; 30°54.5'N, 119°50'W; sounding, 2150 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 07°.							
0	15.34		3.85r	0.57	0	15.34		0.57
10	15.34	33.26	4.73	0.57	10	15.34	4.73	0.57
25	15.35		4.76	0.57	20	15.34	4.75	0.57
49	15.36		4.44	0.54	30	15.35	4.72	0.57
76	15.37		4.46	0.54	50	15.36	4.45	0.54
98	14.36		5.03u	0.64	75	15.37	4.46	0.54
					100	(14.26)		(0.65)

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; April 11, 1951; 0700 GCT; 30°35'N, 120°31'W; sounding, 2100 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 07°.								97.80
0	15.62		5.37	0.50	0	15.62	5.37	0.50
10	15.64		5.27	0.51	10	15.64	5.27	0.51
25	15.63		5.30	0.52	20	15.64	5.29	0.52
49	15.78		5.27	0.50	30	15.66	5.30	0.52
73	15.81		5.22	0.49	50	15.79	5.27	0.50
98	16.00		5.19	0.51	75	15.83	5.20	0.49
149	10.02		4.73	1.34	100	16.00	5.18	0.51
196	9.30		3.88	1.56	150	10.00	4.73	1.35
292	7.46		2.84	2.12	200	9.23	3.82	1.57
392	6.38		1.29	2.70	250	8.17	3.26	1.89
488	5.91		0.51	2.96	300	7.36	2.76	2.16
783	4.46		0.47	3.22	400	6.34	1.20	2.73
975	3.80		0.65	3.24	500	(5.87)	(0.50)	(2.98)
1177	3.34		0.80	3.10	600	(5.40)	(0.48)	(3.15)
					700	(4.89)	(0.47)	(3.20)
					800	4.39	0.49	3.22
					1000	3.74	0.68	3.23
CREST; April 11, 1951; 0112 GCT; 30°15'N, 121°11'W; sounding, 2150 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 20°.								97.90
0	15.64		4.57	0.54	0	15.64	4.57	0.54
9	15.65	33.28	4.80	0.54	10	15.64	4.87	0.54
23	15.57		5.25	0.54	20	15.61	5.24	0.54
47	15.27		5.06	0.54	30	15.49	5.24	0.54
70	15.08		5.21	0.56	50	15.27	5.06	0.55
92	14.98		4.85	0.58	75	15.05	5.20	0.56
141	10.94		4.93	1.01	100	14.95	4.85	0.60
185	9.40		4.09	1.58	150	10.59	4.92	1.13
272	8.08		3.07	1.97	200	9.15	3.85	1.67
363	6.76		1.88	2.58	250	8.40	3.30	1.88
452	6.00		0.98	2.93	300	7.63	2.74	2.13
733	4.54		0.39	3.15	400	6.44	1.46	2.77
920	3.95		0.51	3.16	500	(5.74)	(0.65)	(2.98)
1120	3.52		0.79	3.12	600	(5.28)	(0.45)	(3.07)
					700	(4.70)	(0.40)	(3.13)
					800	4.36	0.42	3.16
					1000	3.75	0.60	3.15
CREST; April 12, 1951; 1816 GCT; 31°40.5'N, 116°46.5'W; sounding, 240 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 26°.								100.30
0	14.46		5.42	0.63	0	14.46	5.42	0.63
9	14.24	33.28	5.52	0.58	10	14.24	5.51	0.59
22	12.42		5.19	0.80	20	12.75	5.25	0.70
45	10.68		4.09	1.61	30	11.65	4.85	1.04
66	10.20		3.31	1.78	50	10.53	3.87	1.67
86	9.52		2.44	2.17	75	9.82	2.90	1.88
126	9.42		1.60	-	100	9.46	2.00	2.34
159	9.12		1.17	2.72	150	9.20	1.28	2.67

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
100.40	CREST; April 12, 1951; 2342 GCT; 31°21'N, 117°27'W; sounding, 1020 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 15°.							
0	14.90		5.32	0.56	0	14.90	5.32	0.56
10	14.93	33.21	4.59	0.57	10	14.93	4.59	0.57
24	14.79		4.89	0.61	20	14.85	4.70	0.60
48	12.92		5.16	0.72	30	14.48	5.02	0.64
72	12.62		4.82	0.80	50	12.88	5.15	0.73
95	11.58		4.69	1.06	75	12.56	4.79	0.81
146	9.26		2.92	1.79	100	11.25	4.67	1.15
190	9.10		2.07	2.27	150	9.23	2.80	1.83
280	7.92		1.08	2.64	200	9.06	1.93	2.34
376	7.16		0.61	2.83	250	8.37	1.37	2.54
466	6.40		0.41	2.97	300	7.75	0.95	2.69
750	4.88		0.45	3.14	400	6.98	0.53	2.87
939	4.21		0.51	3.11	500	(6.16)	(0.42)	(3.00)
1139	3.60		0.71	3.05	600	(5.58)	(0.43)	(3.07)
					700	(5.11)	(0.45)	(3.13)
					800	4.68	0.46	3.14
					1000	4.02	0.55	3.09
100.50	CREST; April 13, 1951; 0543 GCT; 31°01'N, 118°07'W; sounding, 980 fm; wind, 300°, force 4; weather, overcast; sea, rough; wire angle, 20°.							
0	14.86		5.26	0.57	0	14.86	5.26	0.57
10	14.90	33.31	5.59	0.56	10	14.90	5.59	0.56
24	13.20		5.83	0.65	20	13.94	5.79	0.60
52	11.44		5.29	1.08	30	12.72	5.80	0.74
75	10.52		4.43	1.47	50	11.52	5.37	1.06
103	9.38		3.80	1.77	75	10.52	4.43	1.47
154	8.59		3.60	1.82	100	9.44	3.84	1.75
204	8.02		2.88	2.20	150	8.63	3.63	1.81
304	7.36		1.16	-	200	8.04	2.96	2.15
407	6.72		0.64	3.06	250	7.68	2.06	(2.48)
507	6.07		0.39	3.13	300	7.38	1.23	(2.78)
803	4.56		0.55	3.32	400	6.76	0.67	(3.05)
1004	3.88		0.67	3.33	500	6.12	0.40	3.12
1204	3.39		0.87	3.33	600	(5.54)	(0.41)	(3.19)
					700	(5.04)	(0.48)	(3.26)
					800	(4.57)	(0.55)	(3.32)
					1000	3.89	0.65	3.33
100.60	CREST; April 13, 1951; 1154 GCT; 30°40.5'N, 118°48'W; sounding, 1600 fm; wind, 280°, force 4; weather, overcast; sea, rough; wire angle, 32°.							
0	15.78		5.21	0.56	0	15.78	5.21	0.56
8	15.27r	33.35	5.31	0.54	10	15.78	5.30	0.55
21	15.78		5.09	0.59	20	15.78	5.13	0.59
47	15.84		5.01	0.62	30	15.80	5.04	0.60
68	14.12		5.21	0.65	50	15.84	5.03	0.62
92	11.80		5.20	0.95	75	13.90	5.20	0.67
136	9.82		4.03	1.58	100	11.23	5.16	1.10
177	9.10		3.33	1.80	150	9.52	3.77	1.67
258	7.92		3.00	2.12	200	8.74	3.15	1.90
343	6.81		1.42	2.73	250	8.03	3.02	2.09
426	6.40		0.58	3.00	300	7.30	2.33	2.45
678	5.06		0.32	3.33	400	6.52	0.76	2.93
859	4.39		1.25u	3.38	500	6.05	0.41	3.15
1050	3.80		1.37u	3.17	600	5.50	0.34	3.28
					700	4.96		3.34
					800	4.58		3.38
					1000	3.93		3.23

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; April 13, 1951; 1722, 1853, 1940 GCT; 30°20'N, 119°28.5'W; sounding, 2100 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 23°, 33°, missing. 100.70

0	15.81		4.91	0.56	0	15.81	4.91	0.56
9	15.31	33.37	5.01	0.55	10	15.82	5.01	0.55
23	15.82		5.05	0.53	20	15.82	5.05	0.53
51	15.34		4.93	0.57	30	15.80	5.04	0.53
72	14.02		5.21	0.62	50	15.40	4.93	0.56
98	11.99		5.13	0.89	75	13.70	5.21	0.63
143	9.94		3.88	1.59	100	11.55	5.11	0.91
189	9.36		2.99	1.87	150	9.79	3.68	1.66
538a)	5.76		0.39	3.16				
876	4.37		0.39	3.28				
1046	3.78		0.58	3.19				
1306	3.11		0.96	3.13				
1630	2.67		1.22	3.02				
1903	2.24		1.55	-				
2432	1.83		2.20	2.75				
2754	1.71		2.41	2.72	1000	4.00	0.54	3.22
3141	1.62		2.61	-	1200	3.34	0.80	3.14
					1500	2.83	1.14	3.07
					2000	2.13	1.66	2.90
					2500	1.81	2.27	2.74
					3000	1.64	2.54	

CREST; April 14, 1951; 0217 GCT; 30°05'N, 120°08.5'W; sounding, 2050 fm; wind, 300°, force 5; weather, overcast; sea, rough; wire angle, 25°. 100.80

0	16.34		5.28	0.57	0	16.34	5.28	0.57
9	16.35	33.53	5.31	0.58	10	16.35	5.30	0.58
22	16.36		5.26	0.61	20	16.35	5.26	0.60
49	16.34		5.33	0.62	30	16.35	5.26	0.62
71	16.39		5.27	0.68	50	16.35	5.32	0.62
97	13.80		5.27	0.76	75	16.39	5.27	0.69
142	11.52		4.71	1.13	100	13.40	5.27	0.77
187	9.56		4.07	1.77	150	11.15	4.60	1.24
278	7.78		2.56	2.36	200	9.24	3.90	1.89
372	6.66		1.44	2.85	250	8.27	3.07	2.22
464	5.92		0.71	3.15	300	7.49	2.27	2.47
739	4.70		0.38	3.27	400	6.40	1.13	2.96
929	4.17		0.54	3.29	500	(5.69)	(0.64)	(3.18)
1125	3.62		0.71	3.28	600	(5.23)	(0.48)	(3.23)
					700	(4.85)	(0.38)	(3.26)
					800	4.50	0.40	3.28
					1000	3.96	0.62	3.29

CREST; April 14, 1951; 0810 GCT; 29°40'N, 120°48.5'W; sounding, 2150 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 15°. 100.90

0	15.75		4.97	0.54	0	15.75	4.97	0.54
10	15.77	33.34	5.20	0.52	10	15.77	5.20	0.52
24	15.78		5.37	0.52	20	15.78	5.35	0.52
53	15.76		5.00	0.53	30	15.78	5.36	0.52
76	15.61		4.95	0.54	50	15.77	5.00	0.53
105	13.74		4.98	0.66	75	15.63	4.95	0.54
157	11.10		4.39	1.13	100	14.15	4.96	0.62
211	9.24		3.67	1.69	150	11.38	4.50	1.07
313	7.40		2.19	2.38	200	9.56	3.80	1.59
421	6.34		1.22	-	250	8.47	3.06	1.97
525	5.76		0.49	2.96	300	7.62	2.36	2.30
628	5.20		0.38	3.08	400	6.52	1.37	2.70
831	4.38		0.42	3.17	500	5.88	0.59	2.92
1033	3.79		0.65	3.12	600	5.34	0.40	3.06
1237	3.36		0.85	3.05	700	4.88	0.38	3.12
					800	4.50	0.40	3.16
					1000	3.87	0.60	3.13

a) Separation of second and third casts not indicated on original data sheets.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
100.100	CREST; April 14, 1951; 1349 GCT; 29°20'N, 121°28.5'W; sounding, 2200 fm; wind, 300°, force 4; weather, overcast; sea, rough; wire angle, 13°.							
0	16.23		5.01	0.55	0	16.23	5.01	0.55
10	16.22	33.47	5.19	0.62	10	16.22	5.19	0.62
24	16.24		5.21	0.58	20	16.24	5.20	0.58
53	16.23		5.00	0.58	30	16.24	5.18	0.58
77	16.26		5.10	0.59	50	16.24	5.00	0.58
105	13.90		4.71	0.74	75	16.25	5.10	0.58
157	10.95		4.08	1.33	100	14.70	4.78	0.60
208	9.82		2.53	2.29	150	11.27	4.17	1.24
311	8.94		1.55	2.57	200	9.98	2.74	2.23
419	7.54		1.13	-	250	9.39	2.05	2.43
523	6.13		0.62	3.15	300	9.03	1.63	2.54
625	5.54		0.38	3.28	400	7.85	1.20	2.82
825	4.60		0.52	3.27	500	6.43	0.72	3.10
1028	3.96		0.66	3.27	600	5.66	0.40	3.26
1227	3.50		0.85	3.22	700	5.19	0.40	3.29
					800	4.70	0.50	3.28
					1000	4.04	0.65	3.27
100.110	CREST; April 14, 1951; 1926 GCT; 29°00'N, 122°09'W; sounding, 2300 fm; wind, 300°, force 4; weather, overcast; sea, rough; wire angle, 08°.							
0	16.09		3.94r	0.63	0	16.09		0.63
11	16.08	33.38	4.03r	0.61	10	16.09		0.61
25	16.12		3.78r	0.64	20	16.11		0.63
50	16.05		3.77r	0.64	30	16.11		0.64
74	15.98		3.58r	0.63	50	16.05		0.64
99	14.50		4.33	0.72	75	15.97		0.63
152	11.17		3.55	1.07	100	14.48	4.33	0.72
201	9.70		2.18	1.77	150	11.25	3.59	1.06
295	8.44		1.41	2.48	200	9.72	2.22	1.76
395	6.88		1.00	2.87	250	8.99	1.70	2.25
491	5.94		0.63	3.09	300	8.35	1.38	2.50
591	5.46		0.36	3.19	400	6.83	0.98	2.88
789	4.63		0.33	3.28	500	5.87	0.60	3.10
983	4.02		0.59	3.27	600	5.40	0.36	3.20
1186	3.52		0.79	3.15	700	4.96	0.33	3.26
					800	4.58	0.33	3.28
					1000	3.98	0.60	3.26
100.120	CREST; April 15, 1951; 0018, 0145 GCT; 28°40'N, 122°47'W; sounding, 2300 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 07°, 07°.							
0	15.99		5.52	0.60	0	15.99	5.52	0.60
10	15.98	33.39	5.33	0.61	10	15.98	5.33	0.61
25	15.92		5.39	0.62	20	15.93	5.35	0.62
49	15.91		5.37	0.61	30	15.92	5.39	0.62
73	15.77		5.40	0.61	50	15.90	5.37	0.61
97	14.02		5.53	0.66	75	15.75	5.40	0.61
					100	(13.90)	(5.53)	(0.67)
595	5.54		0.40	-				
989	4.00		0.66	3.31				
1186	3.55		0.78	3.30				
1482	2.88		1.11	3.25				
1724	2.48		1.47	3.15				
1975	2.14		1.79	-				
2224	1.95		2.00	3.06				
2473	1.78		2.21	3.04				
2730	1.72		2.35	-				
3022	1.62		2.00u	2.90	1000	3.98	0.67	3.31
					1200	3.52	0.80	3.30
					1500	2.85	1.12	3.24
					2000	2.11	1.82	3.12
					2500	1.77	2.22	3.04
					3000	1.64		2.91

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; April 8, 1951; 1750 GCT; 30°55'N, 116°43.5'W; sounding, 900 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 20°. 103.35

0	15.15		4.99	0.54	0	15.15	4.99	0.54
9	15.14	33.55	5.24	0.53	10	15.14	5.24	0.54
24	15.14		5.22	0.57	20	15.14	5.23	0.55
47	12.44		5.27	0.77	30	14.55	5.22	0.61
71	10.10		4.13	1.35	50	12.20	5.25	0.81
93	10.18		3.28	1.74	75	10.12	3.90	1.45
141	9.90		2.38	2.18	100	10.16	3.13	1.82
187	9.19		1.94	2.35	150	9.78	2.27	2.21
273	8.13		1.86	-	200	9.01	1.90	(2.41)
365	7.64		0.78	3.04	250	8.36	1.86	(2.70)
454	6.63		0.40	3.18	300	7.94	1.65	(2.88)
546	6.00		0.32	3.21	400	7.31	0.60	3.10
728	4.88		0.50	3.35	500	6.30	0.35	3.20
912	4.27		0.51	3.31	600	5.64	0.37	3.25
1109	3.75		0.61	3.29	700	5.03	0.49	3.34
					800	4.61	0.49	3.33
					1000	4.05	0.52	3.30

CREST; April 8, 1951; 1358 GCT; 30°45'N, 117°04.5'W; sounding, 1070 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 17°. 103.40

0	14.88		5.25	0.54	0	14.88	5.25	0.54
10	14.89	33.26	5.30	0.54	10	14.89	5.30	0.54
24	14.90		5.17	0.54	20	14.90	5.18	0.54
48	14.08		5.36	0.55	30	14.85	5.25	0.54
73	12.86		5.43	0.70	50	14.01	5.36	0.56
96	11.04		4.91	1.04	75	12.77	5.42	0.73
146	9.47		3.37	1.65	100	10.81	4.70	1.09
190	8.65		3.23	1.84	150	9.37	3.36	1.68
280	7.88		1.87	2.41	200	8.53	3.08	1.88
376	7.42		0.61	2.90	250	8.11	2.34	2.20
466	6.41		-	2.94	300	7.77	1.52	2.56
562	5.78		0.37	2.99	400	7.20	0.52	2.92
748	4.92		0.34	3.10	500	6.17	0.44	2.95
933	4.27		0.42	3.15	600	5.58	0.40	3.01
1132	3.64		0.64	-	700	5.12	0.34	3.07
					800	4.70	0.35	3.12
					1000	4.02	0.47	

CREST; April 8, 1951; 0759 GCT; 30°26'N, 117°44.5'W; sounding, 1500 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 11°. 103.50

0	15.80		4.89	0.54	0	15.80	4.89	0.54
10	15.78	33.39	4.21	0.55	10	15.78	4.21	0.55
25	15.80		4.71	0.57	20	15.80	4.65	0.56
49	15.72		4.80	0.57	30	15.80	4.73	0.57
73	14.90		4.35	0.64	50	15.72	4.80	0.57
96	11.87		3.60	1.21	75	14.75	4.25	0.65
148	10.70		2.39	1.87	100	11.30	3.48	1.38
195	9.64		2.10	2.12	150	10.70	2.38	1.88
289	8.05		1.61	2.65	200	9.54	2.08	2.15
386	7.46		0.59	2.78	250	8.57	1.84	2.47
485	6.72		0.35	3.14	300	7.97	1.48	2.67
577	5.82		0.33	3.26	400	7.36	0.53	2.81
776	4.70		0.32	3.13	500	6.60	0.34	3.17
964	4.14		0.46	3.10	600	5.64	0.33	3.25
1162	3.54		0.70	3.12	700	5.08	0.32	3.18
					800	4.61	0.33	3.12
					1000	4.05	0.49	3.10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
103.60	CREST; April 8, 1951; 0133 GCT; 30°06'N, 118°25.5'W; sounding, 1850 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 01°.							
0	15.98		4.99	0.57	0	15.98	4.99	0.57
10	15.97	33.46	4.77	0.52	10	15.97	4.77	0.52
25	15.95		4.95	0.56	20	15.95	4.93	0.54
50	15.88		4.84	0.58	30	15.95	4.95	0.57
74	14.36		4.72	0.64	50	15.88	4.84	0.58
98	12.63		4.26	1.16	75	14.27	4.72	0.65
150	10.76		2.54	1.80	100	12.52	4.22	1.25
198	9.87		1.91	2.15	150	10.76	2.54	1.80
294	8.21		1.41	2.46	200	9.83	1.88	2.16
395	7.71		0.52	2.86	250	8.96	1.58	2.34
490	6.74		0.31	3.08	300	8.16	1.37	2.48
590	5.78		0.31	3.11	400	7.68	0.50	2.87
791	4.60		0.40	3.12	500	6.65	0.31	3.09
982	4.05		0.56	3.17	600	5.72	0.31	3.11
1181	3.56		0.68	3.12	700	5.08	0.35	3.12
					800	4.56	0.42	3.12
					1000	4.00	0.57	3.17
103.70	CREST; April 7, 1951; 1943 GCT; 29°47'N, 119°00.5'W; sounding, 1950 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 17°.							
0	16.01		4.92	0.56	0	16.01	4.92	0.56
11	16.01		4.83	0.57	10	16.01	4.84	0.57
22	16.00		4.92	0.55	20	16.00	4.92	0.55
47	13.96		4.82	0.76	30	15.50	4.91	0.55
70	12.67		3.75	1.27	50	13.75	4.80	0.85
93	11.40		3.63	1.66	75	12.64	3.68	1.41
143	9.36		3.51	1.77	100	11.03	3.60	1.68
189	8.44		3.13	1.86	150	9.17	3.46	1.79
281	7.50		1.62	2.53	200	8.28	2.88	1.92
377	6.54		1.04	3.02	250	7.78	2.02	2.27
467	6.15		0.51	3.12	300	7.28	1.48	2.66
564	5.66		0.33	3.30	400	6.41	0.90	3.05
755	4.66		0.43	-	500	6.02	0.43	3.18
941	4.09		0.53	3.36	600	5.45	0.34	(3.30)
1140	3.58		0.71	3.29	700	4.92	0.40	(3.32)
					800	4.50	0.46	(3.34)
					1000	3.94	0.59	3.35
103.80	CREST; April 7, 1951; 1406 GCT; 29°28'N, 119°46'W; sounding, 2000 fm; wind, 140°, force 4; weather, cloudy; sea, moderate; wire angle, 18°.							
0	15.89		5.06	0.54	0	15.89	5.06	0.54
10	15.90	33.48	5.24	0.56	10	15.90	5.24	0.56
24	15.90		5.22	0.63	20	15.90	5.22	0.63
48	13.68		5.59	0.64	30	15.86	5.26	0.64
70	11.97		4.96	0.90	50	13.45	5.58	0.64
93	10.73		4.30	1.33	75	11.60	4.77	1.01
142	9.79		3.04	-	100	10.57	3.98	1.41
187	8.77		2.77	2.01	150	9.62	3.02	1.83
276	7.66		1.68	2.62	200	8.60	2.62	2.09
370	6.76		1.04	2.84	250	7.97	2.01	2.45
461	6.28		0.44	3.05	300	7.42	1.47	2.70
556	5.84		0.28	3.26	400	6.58	0.84	2.90
741	4.90		0.18	3.23	500	6.05	0.36	3.16
926	4.15		0.62	3.22	600	5.58	0.23	3.25
1126	3.56		0.77	3.17	700	5.09	0.19	3.23
					800	4.63	0.28	3.23
					1000	3.90	0.72	3.20

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; April 6, 1951; 0041 GCT; 30°19'N, 116°17.5'W; sounding, 800 fm; wind, calm; weather, cloudy; sea, moderate; wire angle, 18°. 107.35

0	16.14		5.00	0.52	0	16.14	5.00	0.52
10	16.07	33.39	5.11	0.52	10	16.07	5.11	0.52
24	15.80		5.08	0.55	20	15.90	5.09	0.53
47	14.21		5.26	0.58	30	15.55	5.08	0.56
70	11.82		4.90	1.01	50	13.90	5.24	0.60
93	10.67		3.93	1.40	75	11.54	4.74	1.10
140	9.52		3.33	1.84	100	10.46	3.78	1.48
183	8.83		2.43	1.96	150	9.36	3.18	1.87
268	7.82		1.58	2.61	200	8.58	2.21	2.02
359	7.90		0.59	2.93	250	7.93	1.73	2.43
445	6.87		0.40	2.97	300	7.83	1.22	2.77
534	6.24		0.29	2.98	400	7.48	0.48	2.96
713	5.19		0.35	3.10	500	6.46	0.32	2.98
890	4.51		0.44	3.16	600	5.85	0.31	3.01
1084	3.89		0.56	3.19	700	5.27	0.34	3.09
					800	4.83	0.40	3.14
					1000	4.16	0.50	3.17

CREST; April 6, 1951; 0537 GCT; 30°10.5'N, 116°43.5'W; sounding, 1100 fm; wind, 320°, force 5; weather, partly cloudy; sea, moderate; wire angle, 30°. 107.40

0	15.42		5.48	0.56	0	15.42	5.48	0.56
10	15.44	33.26	5.25	0.57	10	15.44	5.25	0.57
22	15.50		5.54	0.56	20	15.50	5.53	0.57
44	14.10		5.65	0.57	30	14.93	5.59	0.56
64	13.81		5.59	0.62	50	13.61	5.64	0.58
85	12.02		4.73	1.09	75	12.75	5.33	0.74
127	10.60		3.51	1.66	100	11.40	4.13	1.39
164	9.64		2.66	2.04	150	9.85	2.96	1.92
240	9.25		1.45	2.53	200	9.42	2.06	2.28
320	8.36		0.96	2.82	250	9.17	1.34	2.58
399	7.47		0.55	3.02	300	8.62	1.04	2.77
483	6.96		0.28	3.15	400	7.47	0.54	3.02
645	5.75		0.25	3.23	500	6.83	0.27	3.17
811	4.82		0.32	3.19	600	6.05	0.25	3.21
1002	4.08		0.49	3.07	700	5.40	0.25	3.22
					800	4.88	0.31	3.19
					1000	4.08	0.49	3.07

CREST; April 6, 1951; 1206 GCT; 29°50.5'N, 117°23.5'W; sounding, 1300 fm; wind, 280°, force 4; weather, partly cloudy; sea, moderate; wire angle, 15°. 107.50

0	16.03		4.98	0.58	0	16.03	4.98	0.58
10	16.05	33.44	4.82	0.52	10	16.05	4.82	0.52
24	16.04		4.16	0.53	20	16.04	4.25	0.52
48	15.52		5.33	0.54	30	16.00	4.17	0.53
72	15.24		4.43	0.59	50	15.50	5.32	0.54
95	13.58		4.40	0.83	75	15.20	4.42	0.61
145	10.95		2.84	1.77	100	13.02	4.40	0.95
					150	(10.85)	(2.69)	(1.83)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
107.60	CREST; April 6, 1951; 1837 GCT; 29°31'N, 118°03'W; sounding, 1900 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 15°.							
0	16.27		5.03	0.55	0	16.27	5.03	0.55
10	16.25		5.20	0.53	10	16.25	5.20	0.53
25	16.26		4.70	0.52	20	16.25	4.72	0.52
54	15.72		5.22	0.52	30	16.25	4.72	0.52
77	14.88		5.12	0.57	50	15.89	5.20	0.52
105	12.18		4.31	1.13	75	14.91	5.14	0.56
155	10.32		2.79	-	100	14.20	4.53	0.95
207	9.46		2.24	2.08	150	10.45	2.86	1.87
307	8.84		0.92	-	200	9.57	2.33	2.07
					250	9.14	1.63	
					300	8.88	0.95	
107.70	CREST; April 7, 1951; 0053, 0108 GCT; 29°11'N, 118°43'W; sounding, 1800 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 10°, 11°.							
0	15.64		5.24	0.63	0	15.64	5.24	0.63
10	15.64	33.31	5.18	0.61	10	15.64	5.18	0.61
					20	15.63	5.33	0.61
24	15.62		5.35	0.63	30	15.50	5.35	0.63
48	14.48		5.35	0.64	50	14.39	5.35	0.64
72	13.64		5.25	0.72	75	13.43	5.20	0.74
95	11.58		4.79	1.09	100	11.27	4.67	1.20
148	9.69		3.42	1.88	150	9.66	3.36	1.90
193	9.83		1.92	2.45	200	9.82	1.82	2.49
288	8.87		1.00	2.89	250	9.40	1.31	2.72
386	7.64		0.49	-	300	8.71	0.93	
489	6.64		0.35	-	400	7.50	0.46	
587	5.78		0.33	3.38	500	6.57	0.33	
782	4.92		0.36	-	600	5.72	0.33	
981	4.12		0.48	3.44	700	5.27	0.35	
1152	3.54		1.09	-	800	4.86	0.36	
					1000	4.06	0.52	
107.80	CREST; April 7, 1951; 0643 GCT; 28°51.5'N, 119°22.5'W; sounding, 1920 fm; wind, 320°, force 2; weather, cloudy; sea, rough; wire angle, 00°.							
0	15.47		5.01	0.58	0	15.47	5.01	0.58
10	15.61		5.10	0.56	10	15.61	5.10	0.56
25	15.62		4.87	0.55	20	15.62	4.90	0.55
50	14.22		5.29	0.58	30	15.27	5.14	0.55
74	12.41		5.06	0.81	50	14.22	5.29	0.58
					75	(12.30)	(5.02)	(0.86)
107.80	CREST; April 7, 1951; 0747 GCT;[a] 28°51.5'N, 119°22.5'W; sounding, 1920 fm; wind, 320°, force 2; weather, cloudy; sea, rough; wire angle, 02°.							
668	5.18							
692	5.07							
716	4.94							
740	4.90							
764	4.78							
788	4.62							
813	4.50							
838	4.44							
862	4.36							
887	4.25							
911	4.22							
936	4.10							
961	4.03							
986	3.94							
1017	3.83							

a) Test cast.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

HORIZON; April 6, 1951; 0351 GCT; 29°46.5'N, 116°00.5'W; sounding, 750 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 12°. 110.35

0	15.40	33.45E	5.99	0.32	0	15.40	33.45	5.99	0.32	24.71	324	0.00
10	15.09	33.44E	5.90	0.34	10	15.09	33.44	5.90	0.34	24.77	319	0.03
25	11.87	33.61E	5.42	0.87	20	13.20	33.59	5.66	0.62	25.28	270	0.06
49	10.30	33.59E	3.81	-	30	11.42	33.61	5.15	1.00	25.64	237	0.09
73	9.88	33.66E	3.42	1.59	50	10.30	33.59	3.80	1.40	25.82	220	0.13
96	9.70	33.86E	3.03	-	75	9.86	33.67	3.38	1.60	25.96	207	0.19
149	9.41	34.12E	2.10	2.04	100	9.66	33.89	2.93	1.79	26.16	188	0.24
193	9.17	34.18E	1.75	2.17	150	9.40	34.12	2.09	2.04	26.38	168	0.33
285	8.66	34.38E	0.74	2.67	200	9.14	34.21	1.69	2.20	26.50	158	0.49
382	7.82	34.44E	0.51	-	250	8.86	34.29	1.14	2.48	26.60	149	0.49
474	6.96	34.37E	0.39	2.86	300	8.55	34.40	0.71	2.70	26.74	137	0.56
572	6.32	34.39E	0.27	2.98	400	7.63	34.43	0.48	2.82	26.90	123	0.69
666	5.53	34.45E	0.32	-	500	6.78	34.37	0.35	2.90	26.97	117	0.81
761	4.92	34.45E	0.33	3.04	600	6.07	34.41	0.28	2.98	27.10	105	0.92
962	4.12	34.50E	0.60	-	700	5.29	34.45	0.33	3.02	27.23	94	1.02
					800	4.74	34.45	0.36		27.29	88	1.11
					1000	(3.99)	(34.51)	(0.63)		(27.42)	(76)	(1.28)

HORIZON; April 6, 1951; 0751 GCT; 29°35'N, 116°21.5'W; sounding, 1300 fm; wind, 320°, force 5; weather, cloudy; sea, confused; wire angle, 25°. 110.40

0	15.54	33.44E	5.40	0.45	0	15.54	33.44	5.40	0.45	24.67	328	0.00
9	15.47	33.30E	5.61	0.47	10	15.45	33.30	5.63	0.47	24.58	337	0.03
27	13.48	33.28E	5.94	0.51	20	15.35	33.28	5.85	0.48	24.59	336	0.07
54	11.52	33.40E	4.86	1.02	30	13.20	33.29	5.92	0.52	25.05	293	0.10
82	10.13	33.58E	4.26	-	50	11.75	33.36	5.13	0.91	25.38	261	0.15
109	9.85	33.92E	3.11	1.74	75	10.37	33.53	4.40	1.28	25.76	226	0.22
161	9.15	34.08E	2.55	2.02	100	9.91	33.76	3.45	1.61	26.02	202	0.27
210	9.37	34.29E	1.36	2.48	150	9.27	34.05	2.70	1.98	26.35	171	0.36
308	8.50	34.41E	0.60	-	200	9.34	34.23	1.54	2.36	26.48	160	0.45
402	7.73	34.34E	0.64	2.81	250	9.07	34.37	0.83	(2.66)	26.63	146	0.52
500	6.63	34.38E	-	2.99	300	8.57	34.41	0.61	(2.76)	26.74	137	0.59
594	5.94	34.36E	0.29	3.02	400	7.74	34.34	0.65	(2.80)	26.81	131	0.73
793	5.06	34.39E	0.33	3.10	500	6.63	34.38	0.47	2.99	27.00	114	0.85
993	4.13	34.51E	-	3.04	600	5.92	34.36	0.30	3.02	27.08	107	0.96
1200	3.59	34.45E	0.75	3.06	700	5.44	34.37	0.30	3.06	27.14	101	1.07
					800	5.02	34.39	(0.34)	3.10	27.21	96	1.17
					1000	4.09	34.51	(0.52)	3.04	27.41	77	1.34

HORIZON; April 6, 1951; 1352 GCT; 29°12.5'N, 117°05'W; sounding, 1900 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 30°. 110.50

0	16.14	33.40E	5.22	0.42	0	16.14	33.40	5.22	0.42	24.50	344	0.00
9	16.20	33.46E	5.26	0.41	10	16.2	33.46	5.25	0.41	24.54	341	0.03
22	16.1	33.40E	5.19	0.42	20	16.2	33.40	5.20	0.42	24.50	345	0.07
48	15.80	33.52E	5.22	0.42	30	16.1	33.43	5.19	0.42	24.54	341	0.10
69	15.00	33.44E	5.31	0.47	50	15.75	33.52	5.25	0.42	24.69	328	0.17
94	12.23	33.39E	4.47	0.95	75	13.90	33.42	5.23	0.52	25.01	298	0.25
139	10.28	33.63E	3.53	1.52	100	11.92	33.40	4.32	1.07	25.38	263	0.32
181	9.34	33.93E	2.63	1.93	150	10.00	33.70	3.29	1.64	25.96	209	0.44
265	8.70	34.16E	1.41	2.51	200	9.13	33.99	2.34	2.10	26.33	174	0.53
353	8.06	34.34E	0.68	2.78	250	8.78	34.12	1.59	2.43	26.48	160	0.62
438	7.25	34.35E	0.42	2.93	300	8.47	34.25	1.05	2.64	26.63	147	0.70
521	6.54	34.30E	0.28	3.04	400	7.61	34.36	0.50	2.87	26.85	128	0.83
687	5.56	34.46E	0.28	3.14	500	6.70	34.31	0.30	3.01	26.94	120	0.96
866	4.64	34.38E	0.40	-	600	6.08		0.28	3.10			
1057	3.94	34.47E	0.62	3.10	700	5.49		0.29	(3.15)			
					800	4.95		0.35	(3.18)			
					1000	4.14		0.53	(3.13)			

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Horizon samples on Cruise 5104, it is estimated that the mean effect of evaporation was 0.017‰, with a standard deviation of 0.054‰.

SIO

CCOFI 5104

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
110.60	HORIZON; April 6, 1951; 1859, 2049 GCT; 28°53'N, 117°42'W; sounding, 1990 fm; wind, 280°, force 4; weather, overcast; sea, very rough; wire angle, 12°, 17°.											
0	16.23	33.47E	2.04u	0.44	0	16.23	33.47		0.44	24.54	341	0.00
10	16.18	33.49E	2.92u	0.45	10	16.18	33.49		0.45	24.56	338	0.03
25	16.20	33.61E	2.45u	0.44	20	16.19	33.60		0.44	24.65	331	0.07
49	16.18	33.53E	2.52u	0.45	30	16.20	33.61		0.44	24.65	331	0.10
73	15.70	33.52E	2.82u	0.46	50	16.18	33.53		0.45	24.60	337	0.17
97	12.66	33.47E	3.80u	-	75	15.67	33.52		(0.46)	24.70	327	0.25
151	10.78	33.77E	1.87u	1.67	100	12.42	33.47		(0.92)	25.34	267	0.33
199	10.28	34.12E	1.11u	2.18	150	10.79	33.76		(1.65)	25.87	217	0.45
295	9.29	34.40E	0.57u	2.54	200	10.27	34.12		2.18	26.24	183	0.55
394	8.28	34.33E	0.40u	2.76	250	9.77	34.35		2.40	26.50	159	0.63
489	7.18	34.34E	0.45u	-	300	9.25	34.40		2.56	26.63	148	0.71
589	6.24	34.36E	0.24	3.06	400	8.20	34.33		2.77	26.74	139	0.86
784	4.97	34.43E	0.27	3.12	500	7.06	34.34		2.92	26.91	123	0.99
977	4.24	34.52E	0.36	3.10	600	6.10	34.36	0.28	3.03	27.06	110	1.11
1180	3.64	34.74E	0.48	-	700	5.42	34.38	0.28	3.09	27.16	100	1.21
					800	4.89	34.44	0.27	3.12	27.26	90	1.31
622a)	5.86	34.36E	0.33	3.01	1000	4.20	34.52	0.35	3.10	27.40	78	1.48
1035	4.11	34.52E	0.50	3.17	1200	3.59	34.56	0.68	3.08	27.50	69	1.63
1242	3.50	34.56E	0.75	-	1500	2.97	34.60	1.06	3.00	27.59	61	1.82
1550	2.84	34.60E	1.13	2.99	2000	2.15	34.62	1.83	2.74	27.68	52	2.11
1810	2.39	34.60E	1.56	2.80	2500	1.82	34.64	2.22	2.63	27.72	48	2.37
2070	2.06	34.63E	1.92	2.73	3000	1.66	34.67	2.45		27.76	46	2.61
2332	1.88	34.65E	2.18	2.66								
2592	1.80	34.63E	2.23	2.62								
2882	1.69	34.67E	2.41	2.58								
3230	1.64	34.63E	2.49	-								
110.70	HORIZON; April 7, 1951; 0215 GCT; 28°36.5'N, 118°18'W; sounding, 1800 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 18°.											
0	16.38	33.48E	5.31	0.46	0	16.38	33.48	5.31	0.46	24.51	343	0.00
10	16.34	33.48E	5.13	-	10	16.34	33.48	5.13	0.41	24.52	342	0.03
24	16.36	33.52E	5.32	0.44	20	16.35	33.51	5.25	0.43	24.54	341	0.07
52	15.02	33.53E	5.57	0.47	30	16.31	33.53	5.41	0.44	24.57	339	0.10
76	13.58	33.49E	5.42	0.64	50	15.20	33.53	5.57	0.47	24.82	316	0.17
103	11.58	33.54E	4.18	1.17	75	13.70	33.49	5.43	0.64	25.10	289	0.24
154	10.49	34.03E	2.42	1.96	100	11.75	33.52	4.30	1.10	25.51	251	0.31
204	10.42	34.26E	1.37	-	150	10.51	34.00	2.55	1.93	26.10	195	0.42
305	8.84	34.39E	1.05	-	200	10.42	34.25	1.45		26.31	176	0.52
411	7.80	34.36E	0.49	2.88	250	10.02	34.35	1.17		26.46	163	0.60
512	6.60	34.35E	0.33	3.01	300	8.95	34.39	1.07		26.67	144	0.68
613	5.97	34.33E	0.30	3.02	400	7.89	34.36	0.52	(2.86)	26.81	132	0.82
814	4.80	34.50E	0.36	3.20	500	6.75	34.35	0.34	3.00	26.96	118	0.95
1020	4.04	34.49E	0.56	3.15	600	6.04	34.33	0.30	3.02	27.04	111	1.06
1222	3.54	34.48E	0.90	-	700	5.46	34.40	0.30	3.10	27.17	99	1.17
					800	4.90	34.50	0.35	3.20	27.31	86	1.26
					1000	4.10	34.49	0.52	3.16	27.39	79	1.43

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
HORIZON; April 7, 1951; 0747 GCT; 28°17'N, 118°56.5'W; sounding, 1950 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 16°.												110.80
0	15.80	33.31E	5.33	0.48	0	15.80	33.31	5.33	0.48	24.51	343	0.00
10	15.77	33.44E	5.34	0.46	10	15.77	33.44	5.34	0.46	24.62	333	0.03
25	15.79	33.30E	5.30	0.47	20	15.77	33.34	5.32	0.46	24.54	341	0.07
54	14.79	33.25E	5.37	0.47	30	15.75	33.28	5.30	0.47	24.50	345	0.10
76	13.91	33.33E	5.53	0.51	50	14.98	33.25	5.33	0.46	24.65	331	0.17
105	11.52	33.14E	5.05	0.90	75	13.90	33.33	5.53	0.50	24.94	304	0.25
155	10.04	33.74E	4.10	-	100	12.25	33.15	5.17	0.80	25.13	287	0.32
204	8.85	33.94E	3.47	1.74	150	10.14	33.70	4.17	1.34	25.93	211	0.45
302	8.00	34.22E	1.54	2.52	200	8.95	33.92	3.50	1.70	26.30	177	0.55
405	6.79	34.27E	-	2.73	250	8.34	34.10	2.48	2.22	26.54	155	0.63
504	6.31	34.33E	0.45	3.04	300	8.02	34.22	1.57	2.52	26.68	142	0.71
603	5.60	34.34E	0.05u	3.18	400	6.85	34.27	0.75	2.72	26.88	124	0.84
798	4.56	34.39E	0.52	3.21	500	6.34	34.33	0.45	3.02	27.00	114	0.96
998	3.91	34.42E	0.61	3.18	600	5.62	34.34		3.18	27.10	105	1.07
1197	3.44	34.67E	0.98	3.16	700	4.99	34.35		3.20	27.18	97	1.17
					800	4.54	34.39	0.52	3.21	27.26	90	1.27
					1000	3.89	34.42	0.62	3.18	27.35	82	1.44
HORIZON; April 7, 1951; 1337 GCT; 27°56.5'N, 119°35.5'W; sounding, 1950 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 10°.												110.90
0	15.81	33.30E	5.42	-	0	15.81	33.30	5.42		24.51	344	0.00
10	15.59	33.26E	5.30	-	10	15.59	33.26	5.30	0.52	24.52	343	0.03
24	15.61	33.33E	5.29	0.52	20	15.60	33.32	5.29	0.52	24.57	339	0.07
48	15.40	33.31E	5.43	0.48	30	15.59	33.33	5.32	0.51	24.58	338	0.10
73	14.15	33.18E	5.51	0.52	50	15.38	33.31	5.45	0.48	24.61	335	0.17
97	13.43	33.41E	5.39	0.66	75	14.06	33.18	5.51	0.52	24.79	319	0.25
151	10.64	33.70E	4.07	1.24	100	13.40	33.43	5.35	0.68	25.12	288	0.33
198	9.38	33.91E	3.09	1.85	150	10.65	33.70	4.10	1.22	25.85	219	0.46
291	7.92	34.20E	1.92	2.42	200	9.33	33.92	3.05	1.87	26.24	183	0.56
389	6.86	34.22E	1.10	2.78	250	8.52	34.12	2.34	2.22	26.52	156	0.64
484	6.09	34.31E	-	3.03	300	7.80	34.20	1.84	2.45	26.70	141	0.72
582	5.64	34.39E	0.35	3.10	400	6.75	34.22	1.02	2.82	26.86	126	0.85
777	4.70	34.43E	0.43	3.22	500	6.00	34.33	0.43	3.04	27.04	109	0.97
969	4.05	34.52E	0.55	3.21	600	5.55	34.40	0.35	3.11	27.16	99	1.08
1172	3.50	34.58E	0.90	3.15	700	5.09	34.40	0.39	3.19	27.21	95	1.17
					800	4.60	34.44	0.44	3.22	27.30	87	1.27
					1000	3.96	34.54	0.60	3.20	27.45	73	1.43
HORIZON; April 7, 1951; 1916 GCT; 27°40.5'N, 120°18'W; sounding, 2000 fm; wind, 360°, force 3; weather, overcast; sea, very rough; wire angle, 14°.												110.100
0	16.83	33.61E	5.13	0.44	0	16.83	33.61	5.13		24.51	343	0.00
10	16.78	33.49E	4.92	0.42	10	16.78	33.49	4.92		24.42	352	0.03
24	16.80	33.60E	5.03	-	20	16.79	33.60	5.00		24.51	344	0.07
49	16.62	33.57E	5.27	0.46	30	16.80	33.60	5.10		24.51	344	0.10
72	16.98	33.74E	5.12	-	50	16.60	33.57	5.27		24.53	343	0.17
97	14.44	33.39E	5.37	-	75	16.94	33.74	5.14		24.58	339	0.26
149	10.72	33.57E	4.11	-	100	13.90	33.39	5.37		24.98	301	0.34
195	9.50	33.90E	3.63	-	150	10.69	33.57	4.09		25.74	230	0.47
285	8.80	34.30E	1.37	-	200	9.42	33.93	3.55		26.23	183	0.58
381	7.66	34.29E	0.83	2.80	250	9.01	34.19	1.88		26.50	159	0.66
470	6.78	34.37E	0.35	2.95	300	8.68	34.30	1.25		26.64	146	0.74
568	5.97	34.48E	0.31	-	400	7.42	34.30	0.72		26.83	129	0.88
757	4.90	34.52E	0.37	3.14	500	6.54	34.42	0.34		27.04	110	1.00
947	4.22	34.55E	0.52	-	600	5.75	34.49	0.32		27.20	95	1.10
1147	3.66	34.56E	0.72	2.99	700	5.18	34.51	0.34		27.29	88	1.20
					800	4.71	34.52	0.40		27.35	82	1.28
					1000	4.07	34.56	0.57		27.45	73	1.44

S10

CCOFI 5104

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
110.110	HORIZON; April 8, 1951; 0115, 0149, 0336 GCT; 27°16.5'N, 120°55'W; sounding, 1975 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 10°, 12°, 12°.											
0	17.10	33.62E	5.38	0.42	0	17.10	33.62	5.38	0.42	24.45	349	0.00
10	17.05	33.54E	5.30	0.41	10	17.05	33.54	5.30	0.41	24.40	354	0.04
25	17.19	33.78E	5.28	0.41	20	17.10	33.58	5.28	0.41	24.42	352	0.07
49	17.46	33.86E	5.04	0.37	30	17.28	33.81	5.26	0.41	24.56	340	0.11
73	17.46	33.96E	5.40	0.33	50	17.45	33.86	5.05	0.37	24.55	341	0.17
98	13.64	33.52E	5.33	-	75	17.45	33.96	5.39	(0.33)	24.63	334	0.26
					100	(13.55)	(33.52)	(5.31)		(25.16)	(284)	(0.34)
220	9.08	34.10E	2.57	2.02	150	(10.86)	(33.64)	(4.43)		(25.76)	(227)	(0.47)
266	8.54	34.18E	1.84	-	200	(9.41)	(33.99)	(3.05)		(26.28)	(179)	(0.57)
360	7.50	34.27E	1.11	2.72	250	8.72	34.16	2.05	2.21	26.52	156	(0.65)
460	6.42	34.22E	0.67	-	300	8.15	34.23	1.55	2.48	26.67	143	(0.73)
553	5.87	34.34E	0.32	3.03	400	7.04	34.25	0.90	2.82	26.84	128	(0.86)
652	5.34	34.40E	0.34	-	500	6.15	34.25	0.52	2.98	26.96	117	(0.99)
849	4.48	34.47E	0.52	3.14	600	5.60	34.38	0.28	(3.08)	27.13	101	(1.10)
1042	3.90	34.51E	0.74	3.09	700	5.11	34.42	0.40	(3.13)	27.22	93	(1.20)
1245	3.35	34.49E	1.06	-	800	4.67	34.46	0.49	(3.14)	27.31	86	(1.29)
					1000	4.00	34.49	0.60	3.10	27.40	78	(1.45)
595a)	5.63	34.38E	0.27	-	1200	3.49	34.50	0.85		27.46	72	(1.60)
985	4.05	34.49E	0.59	-	1500	2.88	34.58	1.12		27.58	61	(1.81)
1181	3.57	34.51E	0.75	-	2000	2.11	34.60	1.83		27.66	53	(2.10)
1477	2.92	34.58E	1.11	-	2500	1.82	34.63	2.36		27.71	49	(2.36)
1719	2.47	34.60E	1.49	-	3000	1.63	34.63	2.69		27.72	48	(2.61)
1967	2.15	34.60E	1.79	-								
2218	1.95	34.65E	2.14	-								
2470	1.82	34.63E	2.35	-								
2737	1.70	34.63E	2.50	-								
3037	1.63	34.63E	2.73	-								
113.35	HORIZON; April 5, 1951; 2149 GCT; 29°18.5'N, 115°29.5'W; sounding, 350 fm; wind, 220°, force 3; weather, cloudy; sea, rough; wire angle, 26°.											
0	15.86	33.39E	5.76	-	0	15.86	33.39	5.76		24.56	338	0.00
9	15.67	33.35E	5.69	0.45	10	15.66	33.35	5.68	0.45	24.58	337	0.03
22	14.44	33.37E	5.59	0.43	20	15.00	33.37	5.61	0.43	24.74	322	0.07
45	12.47	33.33E	5.51	0.66	30	13.51	33.37	5.56	0.44	25.05	293	0.10
67	10.84	33.44E	4.47	1.16	50	12.15	33.33	5.43	0.80	25.28	271	0.15
88	10.53	-	3.78	1.42	75	10.70		4.20	1.26			
134	10.28	-	2.14	2.06	100	10.44		3.35	1.59			
174	9.42	-	1.78	-	150	10.07		2.02	(2.09)			
215	9.86	-	0.87	-	200	9.60		1.09	(2.42)			
257	9.56	-	0.65	2.66	250	9.65		0.69	(2.64)			
305	9.32	-	0.36	2.78	300	9.34		0.37	2.77			
351	9.00	-	0.33	2.73	400	8.52		0.32				
397	8.56	-	0.32	-								
445	6.29	-	0.37	-								

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
HORIZON; April 5, 1951; 1210 GCT; 28°46.5'N, 116°33'W; sounding, 1850 fm; wind, 220°, force 2; weather, overcast; sea, rough; wire angle, 26°.												113.50
0	15.54	33.38E	5.44	0.44	0	15.54	33.38	5.44	0.44	24.63	332	0.00
9	15.52	33.33E	5.26	0.45	10	15.51	33.33	5.26	0.46	24.59	336	0.03
22	13.98	33.31E	5.57	0.59	20	15.25	33.31	5.53	0.54	24.64	332	0.07
45	11.50	33.34E	4.72	1.00	30	12.60	33.32	5.33	0.74	25.19	279	0.10
67	10.52	33.45E	4.10	1.33	50	11.20	33.35	4.57	1.08	25.48	252	0.15
88	9.98	33.70E	3.32	1.64	75	10.31	33.53	3.75	1.46	25.77	225	0.21
135	9.34	33.86E	2.67	1.98	100	9.77	33.75	3.13	1.74	26.04	200	0.26
177	9.14	34.11E	2.02	-	150	9.25	33.92	2.42		26.25	180	0.36
263	8.30	34.29E	1.06	-	200	8.99	34.20	1.65		26.51	157	0.45
353	7.28	34.31E	0.75	2.91	250	8.44	34.29	1.14		26.67	142	0.52
439	6.80	34.38E	0.35	3.00	300	7.88	34.30	0.89		26.76	134	0.59
531	6.11	34.37E	0.28	3.13	400	6.99	34.34	0.52	2.96	26.92	120	0.72
714	5.02	34.42E	0.29	3.19	500	6.37	34.38	0.28	3.09	27.04	110	0.83
901	4.33	34.42E	0.44	-	600	5.64	34.38	0.28	3.16	27.13	102	0.94
1100	3.74	34.52E	0.79	3.15	700	5.08	34.42	0.29	3.18	27.23	93	1.04
					800	4.67	34.42	0.36	3.20	27.27	89	1.13
					1000	4.04	34.47	0.62	3.18	27.38	80	1.30
HORIZON; April 5, 1951; 0627 GCT; 28°25'N, 117°15'W; sounding, 2010 fm; wind, 270°, force 2; weather, partly cloudy; sea, rough; wire angle, 08°.												113.60
0	16.33	33.54E	5.46	0.53	0	16.33	33.54	5.46	0.53	24.57	337	0.00
10	16.30	33.46E	5.27	0.53	10	16.30	33.46	5.27	0.53	24.52	343	0.03
25	16.26	33.65E	4.55u	0.56	20	16.27	33.62	5.32	0.56	24.64	331	0.07
50	15.70	33.58E	5.53	-	30	16.23	33.64	5.37	0.56	24.67	329	0.10
74	15.47	33.49E	5.57	0.55	50	15.70	33.58	5.53	0.55	24.74	323	0.17
98	12.40	33.29E	5.01	0.99	75	15.47	33.47	5.57	0.55	24.71	326	0.25
151	10.50	33.72E	3.59	1.61	100	12.35	33.29	4.95	1.02	25.22	278	0.32
197	9.59	34.06E	2.64	-	150	10.52	33.70	3.60	1.61	25.87	217	0.45
289	9.10	34.34E	1.05	-	200	9.55	34.08	2.58		26.33	174	0.55
385	7.60	34.29E	0.78	-	250	9.24	34.26	1.66		26.52	157	0.63
476	6.62	34.26E	0.52	2.99	300	9.03	34.34	1.00		26.62	149	0.71
573	6.06	34.38E	0.30	3.11	400	7.37	34.28	0.77		26.82	130	0.85
765	5.00	34.45E	0.33	3.22	500	6.47	34.28	0.44	3.02	26.94	119	0.97
957	4.26	34.48E	0.50	3.21	600	5.89	34.40	0.30	3.14	27.11	104	1.09
1160	3.68	34.44E	0.73	3.26	700	5.34	34.44	0.31	3.20	27.21	95	1.19
					800	4.83	34.46	0.35	3.22	27.29	88	1.28
					1000	4.14	34.48	0.55	3.22	27.38	80	1.45
HORIZON; April 5, 1951; 0030 GCT; 28°02'N, 117°55.5'W; sounding, 1800 fm; wind, 280°, force 2; weather, cloudy; sea, rough; wire angle, 20°.												113.70
0	16.44	33.51E	5.24	-	0	16.44	33.51	5.24		24.52	342	0.00
10	16.40	33.45E	5.20	0.42	10	16.40	33.45	5.20	0.42	24.48	346	0.03
23	16.29	33.47E	5.26	0.44	20	16.32	33.47	5.23	0.43	24.52	343	0.07
51	14.64	33.38E	5.56	0.45	30	16.10	33.46	5.37	0.44	24.56	339	0.10
75	12.93	33.41E	5.07	0.73	50	14.65	33.38	5.55	0.45	24.82	315	0.17
103	11.62	33.52E	4.19	1.17	75	12.93	33.41	5.07	0.73	25.20	280	0.24
153	10.50	34.01E	2.59	1.90	100	11.75	33.50	4.29	1.13	25.49	252	0.31
206	9.60	34.24E	1.78	-	150	10.55	33.99	2.65	1.86	26.09	196	0.42
309	9.40	34.48E	0.57	-	200	9.64	34.23	1.84		26.43	165	0.51
417	7.80	34.31E	0.55	2.86	250	9.49	34.39	0.99		26.58	151	0.59
519	6.58	34.33E	0.33	3.06	300	9.42	34.48	0.59		26.66	145	0.67
623	5.84	34.41E	0.38	3.21	400	8.15	34.33	0.55		26.75	138	0.81
826	4.81	34.52E	0.37	3.23	500	6.76	34.32	0.35	3.02	26.94	120	0.94
1033	4.02	34.51E	0.64	3.07	600	5.98	34.39	0.36	3.18	27.09	106	1.06
1236	3.52	34.52E	0.79	3.08	700	5.40	34.45	0.37	3.22	27.21	95	1.16
					800	4.93	34.51	0.37	3.22	27.32	86	1.25
					1000	4.12	34.51	0.60	3.09	27.40	78	1.41

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
117.35	HORIZON; April 3, 1951; 2126 GCT; 28°38'N, 115°15.5'W; sounding, 120 fm; wind, 160°, force 1; weather, partly cloudy; sea, slight; wire angle, 08°.											
0	16.39	33.52E	5.05		0	16.39	33.52	5.05		24.54	341	0.00
10	15.74	33.46E	4.64		10	15.74	33.46	4.64		24.64	331	0.03
25	15.07	33.38E	4.65		20	15.25	33.39	4.65		24.70	326	0.07
50	13.45	33.56E	-		30	14.90	33.39	4.63		24.77	319	0.10
73	11.44	33.58E	3.67		50	13.45	33.56	4.41		25.21	278	0.16
97	10.80	33.97E	2.27		75	11.37	33.59	3.40		25.63	238	0.22
148	10.12	34.16E	1.43		100	10.74	33.98	2.18		26.05	199	0.28
197	9.90	34.42E	0.57		150	10.10	34.17	1.37		26.31	176	0.37
					200	(9.89)	(34.42)	(0.53)		(26.54)	(155)	(0.46)
117.40	HORIZON; April 4, 1951; 0020 GCT; 28°28'N, 115°36'W; sounding, 550 fm; wind, 180°, force 3; weather, cloudy; sea, moderate; wire angle, 10°.											
0	16.17	33.44E	5.26	-	0	16.17	33.44	5.26		24.53	341	0.00
10	15.46	33.42E	5.20	0.44	10	15.46	33.42	5.20	0.44	24.68	328	0.03
25	14.78	33.40E	5.43	0.46	20	15.00	33.40	5.37	0.44	24.76	320	0.07
49	12.12	33.53E	4.35	0.95	30	14.40	33.40	5.40	0.50	24.89	308	0.10
73	11.18	33.74E	3.22	1.55	50	12.08	33.53	4.27	0.95	25.45	255	0.15
98	10.60	33.93E	2.58	-	75	11.12	33.78	3.15	1.56	25.82	220	0.21
150	10.14	34.08E	2.24	1.98	100	10.58	33.94	2.52	1.74	26.04	199	0.27
198	10.04	34.50E	0.94	-	150	10.14	34.08	2.24	1.98	26.23	183	0.36
290	9.03	34.46E	0.48	2.72	200	10.04	34.50	0.93	2.41	26.57	151	0.45
389	7.88	34.47E	0.32	2.84	250	9.65	34.48	0.65	2.62	26.62	147	0.52
482	6.75	34.46E	0.37	-	300	8.90	34.46	0.44	2.74	26.73	138	0.59
581	6.06	34.41E	0.33	-	400	7.75	34.47	0.33		26.92	122	0.73
678	5.68	-	0.34	3.04	500	6.58	34.46	0.35		27.07	107	0.84
779	5.01	-	0.35	2.99	600	5.96	(34.41)	0.34		(27.11)	(104)	(0.95)
878	4.78	-	0.46	-	700	5.55		0.34				
					800	4.94		0.35				
117.50	HORIZON; April 4, 1951; 0626 GCT; 28°07'N, 116°14.5'W; sounding, 2300 fm; wind, 180°, force 4; weather, intermittent light drizzle; sea, moderate; wire angle, 08°.											
0	15.85	33.44E	4.89	0.48	0	15.85	33.44	4.89	0.48	24.60	334	0.00
10	15.79	33.37E	5.26	0.46	10	15.79	33.37	5.26	0.46	24.56	339	0.03
25	15.48	33.40E	5.40	0.48	20	15.65	33.40	5.37	0.47	24.62	334	0.07
50	14.33	33.32E	5.59	0.48	30	15.18	33.39	5.45	0.48	24.71	325	0.10
74	12.92	33.33E	5.18	0.73	50	14.33	33.32	5.59	0.48	24.84	313	0.16
98	11.22	33.49E	4.34	1.20	75	12.91	33.33	5.12	0.76	25.14	285	0.24
150	9.62	34.04E	2.81	1.95	100	11.12	33.51	4.24	1.24	25.62	240	0.31
197	9.32	34.34E	1.82	2.26	150	9.62	34.04	2.81	1.95	26.29	177	0.41
289	8.74	34.39E	0.94	2.69	200	9.31	34.35	1.80	2.28	26.58	151	0.49
387	7.69	34.38E	0.46	2.83	250	9.02	34.39	1.26	2.56	26.66	144	0.57
480	6.67	34.38E	0.41	3.05	300	8.64	34.39	0.85	2.72	26.72	139	0.64
578	5.98	34.47E	0.40	3.10	400	7.54	34.38	0.44	2.85	26.88	125	0.77
770	4.89	34.48E	0.37	3.22	500	6.50	34.38	0.40	3.07	27.02	112	0.89
961	4.20	34.49E	0.63	3.06	600	5.85	34.41	0.40	3.11	27.13	103	1.00
1164	3.70	34.56E	0.73	3.20	700	5.29	34.46	0.37	3.18	27.24	93	1.10
					800	4.75	34.48	0.40	3.20	27.31	86	1.19
					1000	4.09	34.49	0.65	3.08	27.39	79	1.36

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

HORIZON; April 4, 1951; 1225 GCT; 27°46'N, 116°50'W; sounding, 2200 fm; wind, 220°, force 4; weather, partly cloudy; sea, rough; wire angle, 35°. 117.60

0	16.48	33.74E	5.23	0.49	0	16.48	33.74	5.23	0.49	24.69	326	0.00
9	16.46	33.60E	3.86u	0.46	10	16.46	33.60		0.46	24.59	336	0.03
20	16.57	33.62E	5.35	0.47	20	16.57	33.62	5.35	0.47	24.58	337	0.07
45	14.90	33.57E	5.29	0.50	30	16.50	33.60	5.34	0.48	24.58	338	0.10
64	13.29	33.61E	4.56	-	50	14.15	33.58	5.24	0.54	25.08	290	0.16
88	11.26	33.47E	4.33	1.14	75	12.20	33.57	4.40	1.01	25.46	255	0.23
131	10.44	33.89E	2.87	1.80	100	10.95	33.54	4.17	1.30	25.67	235	0.29
173	9.80	-	1.92	-	150	10.18		2.44	(2.00)			
256	9.14	34.39E	1.02	2.59	200	9.52		1.50	(2.33)			
345	8.32	-	0.70	-	250	9.18		1.06	(2.57)			
430	7.42	-	0.54	2.94	300	8.78		0.82	2.69			
517	6.58	34.34E	0.41	3.09	400	7.72		0.60	2.88			
694	5.32	34.42E	0.29	3.17	500	6.74		0.43	3.06			
884	4.46	34.49E	0.53	-	600	5.93		0.33	3.13			
1078	3.93	34.48E	0.60	-	700	5.29		0.30	(3.17)			
					800	4.80		0.43				
					1000	4.11		0.56				

HORIZON; April 4, 1951; 1825 GCT; 27°27.5'N, 117°32'W; sounding, 2200 fm; wind, 270°, force 6; weather, partly cloudy; sea, very rough; wire angle, 14°. 117.70

0	16.36	33.45E	5.42	0.43	0	16.36	33.45	5.42	0.43	24.49	345	0.00
10	16.28	33.44E	5.45	0.46	10	16.28	33.44	5.45	0.46	24.50	344	0.03
24	15.56	33.36E	5.57	0.45	20	15.75	33.37	5.54	0.46	24.57	338	0.07
48	14.44	33.35E	5.59	0.47	30	15.28	33.36	5.58	0.45	24.67	329	0.10
72	12.74	33.40E	4.99	0.82	50	14.30	33.35	5.57	0.48	24.87	310	0.17
96	11.48	33.53E	4.16	1.13	75	12.55	33.41	4.85	0.86	25.27	273	0.24
148	10.64	34.03E	2.14	2.08	100	11.40	33.58	3.97	1.21	25.62	240	0.30
194	10.22	34.28E	1.32	2.36	150	10.61	34.05	2.10	2.10	26.12	193	0.41
285	9.58	34.47E	0.52	2.81	200	10.17	34.30	1.24	2.40	26.40	168	0.50
382	8.24	34.45E	0.32	2.92	250	9.81	34.43	0.74	2.70	26.56	154	0.59
474	7.17	34.48E	0.25	3.02	300	9.45	34.47	0.47	2.83	26.65	146	0.66
571	6.22	34.42E	0.22	3.10	400	7.98	34.45	0.30	2.94	26.86	126	0.80
761	5.06	34.49E	0.32	-	500	6.93	34.47	0.25	3.04	27.03	111	0.92
951	4.26	34.52E	0.48	3.20	600	5.98	34.42	0.24	(3.11)	27.12	103	1.03
1153	3.74	34.50E	0.64	3.19	700	5.37	34.46	0.28	(3.14)	27.22	94	1.13
					800	4.89	34.50	0.35	(3.16)	27.31	86	1.22
					1000	4.10	34.52	0.55	3.20	27.42	77	1.38

HORIZON; April 10, 1951; 2114 GCT; 28°03.5'N, 114°56.5'W; sounding, 37 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 00°. 120.35

0	15.06	33.64E	5.39	0.60	0	15.06	33.64	5.39	0.60	24.93	303	0.00
10	14.82	33.49E	5.05	0.56	10	14.82	33.49	5.05	0.56	24.87	310	0.03
25	14.74	33.53E	5.37	0.55	20	14.75	33.52	5.35	0.55	24.90	306	0.06
50	13.40	33.50E	5.38	0.68	30	14.70	33.53	5.37	0.56	24.92	305	0.09
					50	13.40	33.50	5.38	0.68	25.17	282	0.15

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

120.45 HORIZON; April 10, 1951; 1511 GCT; 27°43.5'N, 115°33.5'W; sounding, 1100 fm; wind, 360°, force 5; weather, overcast; sea, rough; wire angle, 30°.

0	15.47	33.59E	5.18	0.51	0	15.47	33.59	5.18	0.51	24.80	315	0.00
9	15.43	33.57E	5.15	0.59	10	15.42	33.57	5.15	0.59	24.80	316	0.03
21	15.26	33.58E	5.05	0.61	20	15.26	33.58	5.06	0.61	24.84	312	0.06
47	12.18	33.67E	3.86	1.40	30	13.75	33.61	4.82	0.64	25.18	280	0.09
68	10.65	33.73E	3.18	1.79	50	11.74	33.68	3.77	1.50	25.63	238	0.14
93	10.24	33.97E	2.41	2.08	75	10.38	33.76	2.95	1.87	25.94	209	0.20
138	10.50	34.34E	1.46	2.46	100	10.25	34.05	2.24	2.15	26.19	186	0.25
182	10.24	34.40E	0.83	-	150	10.45	34.37	1.25		26.40	167	0.34
270	9.00	34.33E	0.64	-	200	10.07	34.39	0.77		26.48	160	0.42
364	8.40	34.46E	0.32	-	250	9.37	34.35	0.70		26.57	153	0.50
454	7.40	34.41E	0.24	3.17	300	8.75	34.36	0.53		26.68	143	0.57
544	6.51	34.48E	0.19	3.20	400	8.04	34.44	0.29		26.85	128	0.71
729	5.24	34.39E	0.27	3.30	500	6.94	34.45	0.20	3.19	27.02	113	0.83
944	4.16	34.54E	-	3.20	600	6.04	34.45	0.20	3.24	27.13	102	0.94
1119	3.68	34.58E	0.73	3.18	700	5.40	34.39	0.25	3.30	27.17	99	1.04
					800	4.84	34.44	0.35	3.26	27.27	90	1.14
					1000	3.97	34.56	0.58	3.20	27.46	72	1.30

120.50 HORIZON; April 10, 1951; 1018 GCT; 27°34'N, 115°53'W; sounding, 1980 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 18°.

0	15.63	33.41E	5.18	-	0	15.63	33.41	5.18		24.63	332	0.00
10	15.59	33.37E	5.06	-	10	15.59	33.37	5.06		24.60	335	0.03
24	15.61	33.46E	5.23	-	20	15.60	33.45	5.19		24.67	329	0.07
53	12.96	33.24E	5.02	0.73	30	15.58	33.44	5.23		24.66	330	0.10
76	11.36	33.58E	4.26	-	50	13.33	33.24	5.08		24.98	299	0.16
104	10.33	33.70E	3.33	-	75	11.36	33.58	4.29		25.63	239	0.23
155	9.26	34.03E	2.74	-	100	10.49	33.68	3.43		25.86	217	0.29
204	10.09	-	0.91	2.76	150	9.28	33.99	2.84		26.30	176	0.39
302	9.22	-	0.43	-	200	10.06		0.95				
404	8.14	34.55E	0.24	-	250	9.80		0.65				
502	7.10	34.42E	0.24	2.94	300	9.23		0.44				
601	6.09	34.48E	0.23	3.15	400	8.18		0.25				
797	5.03	34.48E	0.29	-	500	7.10		0.24				
998	4.16	34.49E	0.48	-	600	6.10		0.23				
1198	3.61	34.52E	0.70	-	700	5.50		0.25				
					800	5.01		0.30				
					1000	4.15		0.48				

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m

120.60

HORIZON; April 10, 1951; 0211, 0403 GCT; 27°14.5'N, 116°34'W; sounding, 1800 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 25°, 15°.

0	16.49	33.58E	5.40	-	0	16.49	33.58	5.40		24.56	338	
9	16.46	33.40E	5.38	0.54	10	16.46		5.38	0.54			
27	16.17	-	5.29	-	20	16.33		5.32	0.54			
54	14.10	33.69E	5.30	0.72	30	16.07		5.30	0.55			
81	11.85	-	4.11	1.27	50	14.90		5.30	0.68			
108	10.56	-	3.38	1.69	75	12.20		4.50	1.06			
162	9.56	-	2.16	2.31	100	10.89		3.56	1.59			
214	9.09	34.37E	1.27	-	150	9.75		2.43	2.20			
318	7.98	34.33E	0.68	-	200	9.20		1.45				
418	7.20	34.40E	0.34	3.19	250	8.73	34.36	0.99		26.68	142	
523	6.37	34.40E	0.24	3.16	300	8.15	34.33	0.75		26.75	136	
624	5.60	-	0.25	3.26	400	7.33	34.39	0.38	(3.16)	26.91	121	
833	4.60	34.49E	0.41	3.29	500	6.55	34.40	0.25	3.24	27.03	111	
1042	3.82	34.51E	0.67	3.22	600	5.78	34.46	0.25	3.26	27.18	98	
1253	3.38	34.58E	0.87	3.16	700	5.18	34.48	0.28	3.26	27.26	90	
					800	4.74	34.49	0.37	3.28	27.32	85	
575a)	6.19	34.38E	0.24	3.28	1000	4.07	34.50	0.54	3.27	27.40	78	
954	4.23	34.49E	0.48	-	1200	3.50	34.58	0.77	3.20	27.52	67	
1144	3.60	34.56E	0.65	3.23	1500	2.88	34.56	1.15	3.14	27.57	63	
1432	3.00	34.56E	1.08	3.16	2000	2.20	34.60	1.75	2.89	27.66	54	
1670	2.66	34.56E	1.29	3.03	2500	1.80	34.63	2.32	2.74	27.71	49	
1916	2.30	34.60E	1.64	2.93	3000	(1.65)	(34.65)	(2.66)	(2.62)	(27.74)	(47)	
2163	2.1 b)	34.61E	1.91	2.80								
2415	1.86	-	2.24	2.76								
2682	1.74	34.63E	2.45	2.66								
2981	1.66	34.65E	2.65	2.62								

120.70

HORIZON; April 9, 1951; 1938 GCT; 26°51.5'N, 117°14'W; sounding, 1910 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 28°.

0	16.51	33.69E	5.30	0.54	0	16.51	33.69	5.30	0.54	24.65	330	0.00
9	16.33	33.57E	5.34	0.52	10	16.31	33.57	5.35	0.52	24.60	335	0.03
23	15.18	33.66E	5.32	0.57	20	16.23	33.65	5.34	0.56	24.68	328	0.07
45	13.40	33.58E	5.10	0.82	30	14.36	33.64	5.29	0.62	25.08	290	0.10
66	11.76	33.58E	4.02	1.31	50	13.16	33.58	4.93	0.92	25.28	271	0.15
85	10.90	33.76E	3.19	1.70	75	11.24	33.60	3.60	1.50	25.66	235	0.22
126	10.51	34.22E	1.74	2.27	100	10.70	33.91	2.60	2.07	26.00	204	0.27
162	9.57	34.18E	2.04	2.32	150	10.00	34.19	2.05	2.29	26.34	172	0.37
237	9.31	34.42E	0.78	-	200	9.36	34.31	1.11	(2.42)	26.54	154	0.45
314	8.26	34.34E	0.60	-	250	9.29	34.42	0.75	(2.60)	26.64	146	0.53
390	7.74c)	34.42E	0.37	2.90	300	8.51	34.35	0.65	(2.74)	26.71	140	0.60
469	6.87	34.45E	0.33	3.02	400	7.66	34.43	0.38	2.92	26.90	123	0.73
630	5.88	34.52E	0.17	3.15	500	6.63	34.46	0.28	3.06	27.06	108	0.85
799	4.62	34.55E	0.36	3.12	600	6.03	34.51	0.18	3.14	27.18	98	0.95
989	4.00	34.48E	0.56	3.16	700	5.37	34.54	0.23	3.14	27.29	88	1.04
					800	4.60	34.55	0.36	3.12	27.38	79	1.13
					1000	(3.98)	(34.48)	(0.58)	(3.17)	(27.40)	(78)	(1.29)

a) Overlapping casts; reconciliation of property curves when necessary.
b) Temperature inferred from pressure thermometer and wire depth.
c) Mean value of 7.70 and 7.77°C.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
120.80	HORIZON; April 9, 1951; 1345 GCT; 26°33.5'N, 117°51'W; sounding, 1780 fm; wind, 360°, force 3; weather, overcast; sea, very rough; wire angle, 20°.											
0	16.64	33.58E	5.11	0.51	0	16.64	33.58	5.11	0.51	24.53	342	0.00
10	16.62	33.49E	5.16	0.50	10	16.62	33.49	5.16	0.50	24.47	348	0.03
24	16.64	33.68E	5.37	0.52	20	16.62	33.67	5.31	0.52	24.60	335	0.07
52	15.58	33.41E	5.48	0.53	30	16.63	33.68	5.42	0.52	24.61	335	0.10
74	14.36	33.38E	5.32	-	50	15.75	33.42	5.48	0.53	24.61	335	0.17
102	11.59	33.36E	5.49	1.08	75	14.34	33.38	5.33	0.77	24.88	310	0.25
151	9.96	33.84E	3.35	1.85	100	11.75	33.36	5.49	1.06	25.38	262	0.32
199	9.82	34.16E	1.55	-	150	9.96	33.83	3.40	1.83	26.07	198	0.44
297	8.64	34.33E	0.81	2.88	200	9.81	34.16	1.51	2.40	26.35	173	0.53
398	7.65	34.39E	0.48	3.07	250	9.34	34.27	1.04	2.70	26.51	158	0.62
497	6.76	34.37E	0.29	3.23	300	8.59	34.33	0.79	2.89	26.68	143	0.69
596	5.92	34.37E	0.30	-	400	7.63	34.39	0.47	3.07	26.87	126	0.83
790	4.94	34.48E	0.33	3.38	500	6.74	34.37	0.30	(3.24)	26.98	116	0.95
991	4.06	34.46E	0.59	3.39	600	5.88	34.37	0.30	(3.33)	27.09	107	1.06
1191	3.54	34.54E	0.78	3.31	700	5.32	34.43	0.30	(3.37)	27.21	95	1.16
					800	4.89	34.48	0.35	3.38	27.30	87	1.26
					1000	4.02	34.46	0.61	3.39	27.38	80	1.42
120.90	HORIZON; April 9, 1951; 0745 GCT; 26°15'N, 118°29'W; sounding, 2000 fm; wind, 360°, force 5; weather, overcast; sea, very rough; wire angle, 24°.											
0	17.84	33.78E	4.89	-	0	17.84	33.78	4.89		24.40	354	0.00
9	17.80	33.78E	4.72	-	10	17.80	33.78	4.72		24.41	353	0.04
23	17.85	33.78E	4.80	0.53	20	17.84	33.78	4.75		24.40	355	0.07
50	17.22	33.76E	5.10	0.53	30	17.84	33.78	4.93	0.53	24.40	355	0.11
74	15.98	33.66E	5.03	0.59	50	17.22	33.76	5.10	0.53	24.53	343	0.18
100	14.18	33.70E	4.86	-	75	15.95	33.66	5.01	(0.59)	24.75	323	0.26
147	10.82	33.74E	3.71	-	100	14.18	33.70	4.86		25.16	284	0.34
192	9.48	34.15E	2.39	2.13	150	10.66	33.75	3.60		25.88	216	0.46
284	8.98	34.40E	0.71	-	200	9.43	34.20	2.20		26.44	164	0.56
382	7.58	34.40E	0.60	2.84	250	9.13	34.37	1.03		26.62	147	0.64
474	6.80a)	34.42E	0.31	-	300	8.87	34.40	0.70		26.69	142	0.71
569	6.17	34.49E	0.30	-	400	7.35	34.40	0.55		26.92	121	0.84
757	4.99	34.43E	0.41	3.13	500	6.64	34.44	0.30		27.04	110	0.96
955	4.20	34.54E	0.62	3.13	600	5.95	34.49	0.31		27.18	98	1.06
1154	3.60	34.55E	0.84	3.09	700	5.31	34.44	0.36		27.22	95	1.16
					800	4.77	34.44	0.45	3.13	27.28	89	1.25
					1000	4.06	34.55	0.68	3.12	27.44	73	1.41
120.100	HORIZON; April 8, 1951; 2348 GCT; 25°53'N, 119°09'W; sounding, 2100 fm; wind, 360°, force 3; weather, overcast; sea, very rough; wire angle, 15°.											
0	17.71	33.67E	5.27	0.47	0	17.71	33.67	5.27	0.47	24.34	359	0.00
10	17.66	33.64E	5.38	0.43	10	17.66	33.64	5.38	0.43	24.33	360	0.04
24	17.67	33.82E	5.18	0.46	20	17.66	33.70	5.25	0.44	24.38	356	0.07
48	16.66	33.70E	5.51	0.41	30	17.65	33.71	5.20	0.46	24.39	356	0.11
72	13.88	33.50E	5.41	0.59	50	16.50	33.70	5.51	0.41	24.65	331	0.18
95	12.31	33.61E	4.64	0.99	75	13.60	33.50	5.36	0.63	25.13	286	0.25
147	9.87	33.86E	3.41	1.74	100	12.02	33.63	4.50	1.07	25.54	247	0.32
192	8.82	34.05E	2.87	-	150	9.80	33.88	3.36	(1.78)	26.13	192	0.43
280	7.59	34.20E	1.71	2.57	200	8.68	34.07	2.76		26.46	161	0.52
375	7.14	34.37E	0.60	2.92	250	7.93	34.16	2.11		26.64	145	0.60
465	6.50	34.38E	0.33	3.04	300	7.42	34.22	1.42	2.66	26.77	134	0.67
560	5.81	34.39E	0.29	3.13	400	7.03	34.38	0.49	2.96	26.95	118	0.80
748	4.91	34.47E	0.37	3.16	500	6.22	34.38	0.31	3.08	27.06	108	0.91
937	4.10	34.50E	0.60	3.06	600	5.60	34.40	0.30	3.14	27.15	100	1.01
1138	3.48	34.55E	0.86	3.10	700	5.12	34.45	0.35	3.16	27.25	91	1.11
					800	4.67	34.48	0.44	3.14	27.32	85	1.20
					1000	3.88	34.52	0.69	3.07	27.44	74	1.36

a) Mean value of 6.77 and 6.83°C.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

HORIZON; April 9, 1951; 0214 GCT;[a] 25°53'N, 119°09'W; sounding, 2100 fm; wind, 360°, force 3; weather, overcast; sea, very rough; wire angle, 20°. 120.100

640	-	34.44E										
662	5.24	34.44E										
685	5.17	34.42E										
708	5.05	34.43E										
735	4.97	34.60E										
756	4.84	34.52E										
780	4.77	34.52E										
804	4.70	34.55E										
827	4.62	34.64E										
852	4.54	34.52E										
875	4.35	34.43E										
899	4.28	34.62E										
924	4.18	34.45E										
949	4.12	34.45E										
974	4.04	34.48E										

HORIZON; April 8, 1951; 1554, 1732 GCT; 25°32.5'N, 119°52'W; sounding, 2150 fm; wind, 360°, force 3; weather, overcast; sea, very rough; wire angle, 08°, 14°. 120.110

0	17.33	33.78E	5.10	0.43	0	17.33	33.78	5.10	0.43	24.52	342	0.00
10	17.27	33.62E	4.65	0.41	10	17.27	33.62	4.65	0.41	24.41	353	0.03
26	17.31	33.72E	5.15	0.46	20	17.28	33.66	5.08	0.45	24.44	351	0.07
51	16.75	33.68E	5.11	0.43	30	17.31	33.72	5.15	0.46	24.47	348	0.11
75	16.19	33.68E	4.86	0.47	50	16.78	33.68	5.11	0.43	24.57	339	0.17
99	13.98	33.62E	4.97	0.54	75	16.19	33.68	4.86	0.47	24.71	327	0.26
151	10.86	33.73E	3.45	1.49	100	13.80	33.62	4.97	0.55	25.18	282	0.33
198	9.48	34.02E	2.91	1.85	150	10.87	33.73	3.48	1.48	25.83	221	0.46
292	7.82	34.12E	1.73	2.55	200	9.42	34.02	2.89	1.86	26.30	177	0.56
390	6.82	34.25E	0.80	2.92	250	8.52	34.08	2.28	2.27	26.49	159	0.65
484	5.90[b]	34.33E	0.41	3.15	300	7.73	34.13	1.62	2.59	26.65	145	0.72
583	5.50	34.38E	0.30	3.31	400	6.72	34.26	0.75	2.95	26.90	123	0.86
778	4.68	34.51E	0.43	3.24	500	5.82	34.34	0.38	3.17	27.07	106	0.97
969	4.04	34.58E	0.59	3.24	600	5.42	34.38	0.30	3.28	27.16	99	1.08
1172	3.56	34.54E	0.76	3.17	700	4.97	34.45	0.30	3.27	27.26	90	1.17
					800	4.60	34.52	0.45	3.23	27.36	81	1.26
622[c]	5.32	34.38E	0.33	-	1000	4.02	34.54	0.59	3.15	27.44	74	1.41
1032	3.93	34.54E	0.57	3.11[d]	1200	3.52	34.55	0.70	3.10	27.50	69	1.56
1238	3.47	34.51E	0.70	3.09	1500	2.84	34.62	1.10	2.98	27.62	58	1.75
1546	2.72	34.63E	1.17	-	2000	2.11	34.66	1.74	2.81	27.71	49	2.02
1803	2.35	34.63E	1.49	2.84	2500	1.79	34.64	2.18	2.67	27.72	48	2.27
2058	2.06	34.67E	1.83	2.81	3000	1.64	34.65	2.45	2.58	27.74	47	2.51
2316	1.88	34.67E	2.08	-								
2576	1.76	34.63E	2.21	2.63								
3212	1.58	34.65E	2.56	2.56								

HORIZON; April 11, 1951; 0340 GCT; 27°17.5'N, 114°52.5'W; sounding, 290 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 00°. 123.40

0	14.96	33.58E	5.53	0.57	0	14.96	33.58	5.53	0.57	24.91	305	0.00
10	14.92	33.51E	5.47	0.59	10	14.92	33.51	5.47	0.59	24.86	310	0.03
25	14.71	33.65E	5.30	0.64	20	14.82	33.62	5.33	0.62	24.97	300	0.06
50	12.18	33.65E	3.84	-	30	14.50	33.65	5.27		25.06	292	0.09
74	11.04	-	2.87	-	50	12.17	33.65	3.84		25.53	248	0.15
					75	(11.04)		(2.86)				

a) Test cast.
b) Mean value of 5.86 and 5.93°C.
c) Overlapping casts; reconciliation of property curves when necessary.
d) Phosphate samples from 1032 meters to 3212 meters appear to have been reversed; they are assumed to be listed in correct order.

SIO

CCOFI 5104

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
123.50	HORIZON; April 11, 1951; 0934 GCT; 26°59'N, 115°31.5'W; sounding, 1810 fm; wind, 340°, force 6; weather, overcast; sea, confused; wire angle, 05°.											
0	15.99	33.47E	5.30	0.58	0	15.99	33.47	5.30	0.58	24.59	336	0.00
10	16.00	33.66E	5.21	0.55	10	16.00	33.66	5.21	0.55	24.74	322	0.03
25	16.02	33.51E	5.26	0.57	20	16.02	33.51	5.25	0.56	24.62	333	0.07
55	15.26	33.54E	5.28	0.57	30	16.00	33.52	5.27	0.57	24.63	333	0.10
79	12.67	33.43E	4.71	1.00	50	15.84	33.54	5.28	0.57	24.68	328	0.17
108	11.25	33.66E	3.61	1.44	75	12.95	33.44	4.92	0.90	25.22	278	0.24
162	10.22	34.10E	2.23	-	100	11.60	33.52	3.87	1.34	25.54	248	0.31
214	9.70	34.36E	1.15	-	150	10.39	34.02	2.50		26.14	191	0.42
318	9.25	34.53E	0.29	2.94	200	9.82	34.31	1.38		26.46	162	0.51
428	7.52	34.48E	0.23	3.10	250	9.50	34.46	0.69		26.63	146	0.58
533	6.67	-	0.19	3.24	300	9.31	34.52	0.35		26.71	140	0.66
637	5.70	34.47E	0.22	3.32	400	8.17	34.50	0.25	3.06	26.88	126	0.79
842	4.68	-	0.35	3.34	500	6.88		0.20	3.20			
1050	3.91	-	0.58	-	600	6.06		0.21	3.30			
1254	3.42	34.52E	0.80	-	700	5.31		0.25	3.32			
					800	4.86		0.31	3.34			
					1000	4.07		0.52				
123.60	HORIZON; April 11, 1951; 1530 GCT; 26°39'N, 116°09.5'W; sounding, 1870 fm; wind, 340°, force 5; weather, overcast; sea, very rough; wire angle, 14°.											
0	16.54	33.55E	5.21	0.52	0	16.54	33.55	5.21	0.52	24.53	342	0.00
10	16.51	33.49E	5.18	0.53	10	16.51	33.49	5.18	0.53	24.49	345	0.03
29	15.31	33.58E	5.03	0.54	20	16.10	33.51	5.08	0.54	24.60	335	0.07
58	14.52	33.43E	5.24	0.60	30	15.30	33.58	5.03	0.54	24.83	313	0.10
86	11.82	33.43E	4.67	1.04	50	14.82	33.47	5.18	0.56	24.85	312	0.16
115	11.13	33.78E	4.92	1.63	75	13.40	33.43	4.82	0.75	25.12	287	0.24
171	9.46	34.02E	2.73	2.05	100	11.43	33.50	4.80	1.38	25.55	246	0.31
226	8.54	34.13E	2.31	-	150	10.15	33.98	3.51	1.96	26.15	190	0.42
339	7.54	34.30E	0.96	2.93	200	8.90	34.07	2.45	(2.18)	26.43	165	0.51
444	6.82	34.34E	0.38	3.19	250	8.28	34.20	2.12	(2.44)	26.62	147	0.58
557	6.18	34.47E	0.24	3.27	300	7.83	34.28	1.42	(2.75)	26.75	135	0.66
664	5.42	34.44E	0.29	3.31	400	7.08	34.31	0.56	3.12	26.88	124	0.79
886	4.47	34.50E	0.43	3.34	500	6.50	34.42	0.26	3.23	27.05	109	0.90
1103	3.78	34.50E	0.69	3.28	600	5.88	34.46	0.26	3.29	27.16	99	1.01
1314	3.30	34.53E	0.89	3.27	700	5.23	34.44	0.30	3.32	27.23	93	1.11
					800	4.79	34.48	0.35	3.34	27.31	86	1.20
					1000	4.06	34.50	0.57	3.30	27.40	78	1.36
127.40	HORIZON; April 12, 1951; 0939 GCT; 26°43'N, 114°28'W; sounding, 1250 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 24°.											
0	14.85	33.45E	5.48	0.58	0	14.85	33.45	5.48	0.58	24.83	313	0.00
9	14.74	33.57E	5.55	0.61	10	14.74	33.58	5.54	0.62	24.95	301	0.03
23	14.33	33.61E	4.98	0.77	20	14.44	33.60	5.05	0.73	25.03	294	0.06
50	12.10	33.72E	3.98	1.27	30	14.16	33.63	4.72	0.90	25.12	286	0.09
73	11.24	33.74E	2.83	1.94	50	12.10	33.72	3.98	1.27	25.60	241	0.14
100	10.28	33.96E	2.41	-	75	11.13	33.74	2.79	(1.96)	25.79	223	0.20
152	10.20	34.34E	1.40	-	100	10.28	33.96	2.41		26.11	193	0.25
202	10.67	34.62E	0.42	-	150	10.20	34.33	1.47		26.42	165	0.34
303	9.36	34.54E	0.21	-	200	10.67	34.62	0.44		26.56	153	0.42
408	8.03	34.50E	0.17	-	250	10.15	34.58	0.30		26.62	148	0.50
510	7.02	34.49E	0.22	-	300	9.38	34.54	0.21		26.72	140	0.57
612	6.08	34.45E	0.19	3.25	400	8.12	34.50	0.17		26.88	125	0.71
811	4.96	34.48E	0.30	3.29	500	7.11	34.49	0.21		27.02	112	0.83
1017	4.10	34.48E	0.50	3.16	600	6.19	34.45	0.20		27.12	104	0.93
1220	3.52	34.56E	0.75	-	700	5.50	34.46	0.23	3.28	27.21	95	1.04
					800	5.00	34.48	0.30	3.29	27.28	89	1.13
					1000	4.15	34.48	0.49	3.17	27.38	80	1..30

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
HORIZON; April 12, 1951; 0311 GCT; 26°23.5'N, 115°08'W; sounding, 1650 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 12°.												127.50
0	16.65	33.66E	5.32	0.53	0	16.65	33.66	5.32	0.53	24.59	336	0.00
10	16.63	33.57E	5.29	0.52	10	16.63	33.57	5.29	0.52	24.52	342	0.03
29	16.61	33.61E	5.32	0.53	20	16.62	33.58	5.30	0.52	24.53	342	0.07
58	16.38	33.79E	5.31	0.53	30	16.60	33.61	5.32	0.53	24.56	339	0.10
88	13.72	33.48E	5.21	0.67	50	16.76	33.76	5.32	0.53	24.64	333	0.17
116	11.77	33.59E	4.25	1.27	75	14.47	33.62	5.27	0.58	25.04	295	0.25
175	10.06	34.13E	2.23	2.24	100	13.04	33.48	4.96	0.94	25.23	277	0.32
232	8.42	34.05E	2.25	2.29	150	10.70	34.06	2.49	1.90	26.12	194	0.44
345	7.82	34.37E	0.67	2.96	200	9.25	34.10	2.24	2.27	26.39	168	0.53
452	6.94	34.32E	0.32	3.15	250	8.27	34.06	2.17	2.38	26.52	157	0.61
566	6.20	34.42E	0.19	3.25	300	8.00	34.20	1.24	2.74	26.67	143	0.69
675	5.59	34.43E	0.26	-	400	7.41	34.35	0.47	3.08	26.87	125	0.82
897	4.49	34.50E	0.37	3.32	500	6.60	34.35	0.25	3.20	26.98	116	0.95
1114	3.76	34.49E	0.66	3.29	600	5.99	34.43	0.20	(3.27)	27.12	103	1.06
1326	3.30	34.53E	0.89	3.26	700	5.47	34.43	0.27	(3.31)	27.19	97	1.16
					800	4.98	34.47	0.31	(3.32)	27.28	89	1.25
					1000	4.09	34.49	0.51	3.31	27.39	79	1.42
HORIZON; April 11, 1951; 2054 GCT; 26°04'N, 115°46.5'W; sounding, 1850 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 26°.												127.60
0	18.02	33.99E	4.88	0.48	0	18.02	33.99	4.88	0.48	24.51	343	0.00
9	17.98	33.80E	4.87	0.49	10	17.98	33.80	4.87	0.49	24.38	356	0.04
22	17.99	33.96E	5.02	0.49	20	17.98	33.92	5.00	0.49	24.47	348	0.07
49	17.94	34.02E	4.89	0.44	30	17.99	34.00	5.00	0.48	24.53	343	0.11
72	17.28	33.90E	5.21	0.47	50	17.93	34.02	4.84	0.44	24.56	340	0.17
98	16.41	33.66E	5.03	0.49	75	17.20	33.86	5.21	0.47	24.61	336	0.26
146	12.32	33.70E	3.34	1.40	100	16.25	33.66	4.95	0.50	24.68	330	0.34
192	10.10	33.97E	2.64	-	150	12.04	33.72	3.29	(1.45)	25.61	242	0.49
284	8.96	34.32E	1.09	2.69	200	9.93	34.01	2.48	(2.00)	26.21	186	0.59
381	7.22	34.22E	0.92	2.88	250	9.29	34.25	1.47	(2.49)	26.50	159	0.68
473	6.56	34.26E	0.46	3.04	300	8.75	34.32	1.06	2.72	26.64	146	0.76
565	6.12	34.46E	0.24	3.12	400	7.00	34.22	0.82	2.92	26.82	129	0.90
749	5.18	34.51E	0.24	3.29	500	6.44	34.31	0.37	3.06	26.97	116	1.02
943	4.28	34.49E	0.42	-	600	5.94	34.49	0.24	3.16	27.18	98	1.13
1140	3.71	34.52E	0.64	-	700	5.42	34.51	0.24	3.26	27.26	91	1.22
					800	4.91	34.51	0.27		27.32	85	1.31
					1000	4.09	34.49	0.49		27.39	79	1.48
HORIZON; April 12, 1951; 1926 GCT; 26°09'N, 114°01'W; sounding, 980 fm; wind, 320°, force 6; weather, overcast; sea, rough; wire angle, 05°.												130.40
0	16.98	33.80E	5.05	0.54	0	16.98	33.80	5.05	0.54	24.62	333	0.00
10	16.93	33.69E	5.10	0.52	10	16.93	33.69	5.10	0.52	24.55	340	0.03
25	-	33.75E	5.12	0.56	20	16.90	33.72	5.12	0.54	24.58	338	0.07
50	16.86	33.78E	5.09	0.58	30	16.87	33.76	5.12	0.57	24.61	334	0.10
74	14.02	33.67E	4.94	0.80	50	16.86	33.78	5.09	0.58	24.63	333	0.17
100	11.90	33.72E	4.03	1.26	75	14.00	33.67	4.91	0.82	25.18	282	0.25
153	10.04	34.08E	2.43	2.06	100	11.90	33.72	4.03	1.26	25.63	239	0.31
201	9.12	34.20E	2.17	-	150	10.11	34.07	2.49	2.02	26.23	183	0.42
295	7.98	34.28E	1.26	2.68	200	9.14	34.20	2.18	2.17	26.49	159	0.50
394	8.08	34.49E	0.21	3.08	250	8.38	34.24	1.77	2.40	26.64	145	0.58
488	7.04	34.52E	0.14	3.19	300	7.97	34.29	1.19	2.71	26.74	136	0.65
588	6.40	34.52E	0.16	3.29	400	8.07	34.50	0.20	3.09	26.89	124	0.78
784	4.99	34.59E	0.29	3.33	500	6.93	34.52	0.15	3.20	27.07	108	0.90
977	4.14	34.60E	0.45	-	600	6.32	34.52	0.17	3.30	27.15	101	1.00
1181	3.69	34.56E	0.66	3.28	700	5.55	34.56	0.23	3.32	27.28	89	1.10
					800	4.89	34.59	0.31	3.33	27.38	79	1.18
					1000	4.07	34.59	0.48	3.34	27.47	71	1.34

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CCOFI 5104

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^5 cm^3/g$	ΔD dyn m

130.50 HORIZON; April 13, 1951; 0237 GCT; 25°59'N, 114°43'W; sounding, 1750 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 14°.

0	17.39	33.79E	5.33	0.50	0	17.39	33.79	5.33	0.50	24.51	343	0.00
10	17.40	33.75E	5.21	0.49	10	17.40	33.75	5.21	0.49	24.48	347	0.03
24	17.44	33.80E	5.32	0.51	20	17.43	33.76	5.29	0.51	24.48	347	0.07
48	17.56	33.89E	5.12	0.47	30	17.49	33.85	5.30	0.51	24.54	342	0.10
72	17.10	33.85E	5.22	0.52	50	17.55	33.89	5.13	0.47	24.55	341	0.17
96	13.58	33.50E	5.29	-	75	17.05	33.80	5.23	0.53	24.60	337	0.26
148	11.28	33.83E	3.06	2.33	100	13.23	33.50	5.26	0.65	25.21	280	0.34
194	10.58	34.25E	1.65	-	150	11.24	33.87	2.95	(2.35)	25.87	217	0.46
286	9.20	34.37E	0.90	-	200	10.50	34.27	1.55	(2.59)	26.32	176	0.56
383	8.04	34.46E	0.44	3.09	250	9.77	34.34	1.13	(2.74)	26.50	160	0.64
474	7.22	34.55E	0.23	-	300	9.00	34.38	0.83	(2.88)	26.65	145	0.72
573	6.37	34.46E	0.33	3.28	400	7.87	34.48	0.39	3.12	26.90	123	0.86
764	5.08	34.50E	0.33	3.33	500	7.00	34.55	0.25	3.24	27.08	106	0.97
953	4.32	34.52E	0.59	-	600	6.15	34.45	0.33	3.29	27.12	104	1.08
1154	3.76	34.56E	0.66	3.33	700	5.46	34.48	0.33	3.32	27.23	94	1.18
					800	4.90	34.51	0.36	3.33	27.32	85	1.27
					1000	4.16	34.53	0.60	3.33	27.42	77	1.43

130.60 HORIZON; April 13, 1951; 0859 GCT; 25°29'N, 115°23'W; sounding, 1800 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 24°.

0	17.70	33.80E	4.68	0.48	0	17.70	33.80	4.68	0.48	24.45	349	0.00
10	17.68	33.71E	4.95	0.49	10	17.68	33.71	4.95	0.49	24.38	356	0.04
23	17.68	33.82E	4.81	0.51	20	17.68	33.76	4.84	0.50	24.42	353	0.07
47	17.72	33.87E	5.03	0.48	30	17.70	33.86	4.85	0.50	24.49	346	0.11
69	17.10	33.81E	4.95	0.52	50	17.70	33.87	5.01	0.48	24.50	346	0.18
91	16.20	33.71E	4.99	0.54	75	16.93	33.79	4.95	0.53	24.62	335	0.26
138	12.55	33.68E	4.25	1.11	100	15.65	33.70	4.96	0.58	24.85	314	0.34
182	11.80	34.19E	1.61	-	150	12.30	33.73	2.95	(1.56)	25.57	246	0.48
268	9.82	34.41E	0.85	2.79	200	11.47	34.28	1.36	(2.38)	26.15	192	0.59
360	8.67	34.41E	0.48	2.97	250	10.29	34.40	0.92	(2.71)	26.45	164	0.68
448	7.77	34.42E	0.29	3.11	300	9.35	34.41	0.71	2.86	26.62	149	0.76
542	7.08	34.47E	0.21	3.24	400	8.25	34.41	0.37	3.03	26.79	133	0.90
729	5.42	34.42E	0.26	3.37	500	7.45	34.45	0.24	3.18	26.94	120	1.03
918	4.58	34.46E	0.35	-	600	6.50	34.46	0.23	3.28	27.08	108	1.15
1121	3.80	34.56E	0.62	3.39	700	5.64	34.42	0.25	3.35	27.16	100	1.25
					800	5.01	34.43	0.27	3.39	27.24	93	1.35
					1000	4.29	34.49	0.45	3.39	27.37	81	1.52

130.70 HORIZON; April 13, 1951; 1517, 1540 GCT; 25°00'N, 116°05'W; sounding, 2100 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 21°, 35°.

0	17.85	33.84E	5.27	0.48	0	17.85	33.84	5.27	0.48	24.44	350	0.00
10	17.82	33.82E	5.19	-	10	17.82	33.82	5.19		24.43	351	0.04
23	17.82	33.83E	5.21	-	20	17.82	33.84	5.20		24.44	350	0.07
46	16.06	33.67E	5.45	0.49	30	17.78	33.82	5.30		24.44	351	0.11
69	15.13	33.68E	5.36	-	50	15.43	33.67	5.44		24.87	310	0.17
91	12.99	33.59E	4.33	-	75	14.90	33.67	5.25		24.99	300	0.25
138	11.79	34.01E	2.21	-	100	12.55	33.60	3.77		25.42	259	0.32
177	11.56	34.59E	0.86	-	150	11.69	34.43	1.61		26.22	184	0.43
					200	11.25	34.56	0.83		26.41	168	0.52
220	10.34	34.53E	0.81	-	250	9.85	34.50	0.67		26.61	149	0.60
290	9.48	34.49E	0.46	-	300	9.37	34.49	0.44		26.68	143	0.67
357	8.83	34.67E	0.29	2.96	400	8.40	34.51	0.25	3.02	26.85	128	0.81
429	8.11	34.51E	0.22	3.05	500	7.33	34.50	0.20	3.16	27.00	115	0.93
576	6.52	34.49E	0.19	3.25	600	6.33	34.49	0.19		27.13	103	1.04
736	5.42	34.51E	0.22	-	700	5.65	34.50	0.20		27.22	95	1.14

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m

HORIZON; April 13, 1951; 2028 GCT; 24°39'N, 116°44'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 06°. 130.80

0	18.25	33.96E	5.08	0.52	0	18.25	33.96	5.08	0.52	24.43	351	0.00
10	18.21	33.93E	5.01	0.50	10	18.21	33.93	5.01	0.50	24.42	352	0.04
25	18.12	33.93E	5.20	0.54	20	18.13	33.93	5.15	0.53	24.44	351	0.07
50	18.11	33.86E	-	0.51	30	18.11	33.93		0.54	24.45	350	0.11
75	16.12	33.78E	5.21	0.57	50	18.11	33.86		0.51	24.40	356	0.18
99	13.12	33.70E	3.94	1.18	75	16.12	33.78	5.21	0.57	24.80	318	0.26
152	10.96	-	2.14	2.14	100	13.05	(33.70)	3.90	1.22	(25.40)	(261)	(0.33)
199	10.48	34.06E	1.06	-	150	11.00		2.19	2.12			
294	9.32	-	0.54	2.86	200	10.46		1.05	2.55			
392	7.96	34.39E	0.26	3.06	250	9.93		0.77	2.74			
488	7.13	34.51E	0.21	3.24	300	9.23		0.50	2.87			
586	6.39	-	0.18	3.34	400	7.88		0.26	3.07			
782	5.12	34.52E	0.25	3.34	500	7.05		0.21	3.26			
976	4.34	-	0.41	3.36	600	6.28		0.18	3.34			
1178	3.69	34.65E	0.68	3.28	700	5.62		0.20	3.34			
					800	5.02		0.26	3.34			
					1000	4.26		0.45	3.36			

HORIZON; April 13, 1951; 2153 GCT;[a] 24°39'N, 116°44'W; sounding, 2000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 15°. 130.80

662	-	34.48E
686	5.68	-
710	5.53	34.42E
734	5.45	34.49E
758	5.28	34.50E
782	5.16	-
806	5.05	34.44E
831	4.96	-
856	4.87	34.53E
879	4.78	-
905	4.67	34.58E
929	4.57	34.46E
954	4.45	34.42E
979	4.34	34.48E
1004	4.21	34.48E

HORIZON; April 15, 1951; 0324 GCT; 25°54.5'N, 113°08'W; sounding, 115 fm; wind, 270°, force 3; weather, partly cloudy; sea, moderate; wire angle, 26°. 133.30

0	16.59	33.78E	5.15	0.51	0	16.59	33.78	5.15	0.51	24.69	326	0.00
9	16.54	33.65E	5.26	0.51	10	16.54	33.65	5.26	0.51	24.60	335	0.03
22	15.82	33.67E	5.26	0.55	20	16.25	33.66	5.26	0.54	24.68	328	0.07
45	13.36	33.92E	4.79	0.88	30	14.40	33.80	5.17	0.63	25.20	279	0.10
68	11.32	33.72E	3.17	1.67	50	12.90	33.91	4.57	1.04	25.59	242	0.15
91	11.20	34.06E	1.93	-	75	11.27	33.73	2.77	1.84	25.76	226	0.21
143	11.16	34.20E	1.25	2.54	100	11.18	34.09	1.77	2.33	26.05	199	0.26
191	11.02	34.51E	0.40	2.89	150	11.15	34.25	1.12	2.58	26.18	188	0.36
					200	(11.00)	(34.52)			(26.42)	(166)	(0.45)

a) Test cast.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
133.40	HORIZON; April 14, 1951; 2038 GCT; 25°40'N, 113°59'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 22°.											
0	-	33.75E	5.13	0.52	0	(16.66)	33.75	5.13	0.52	(24.66)	(330)	(0.00)
9	16.66	33.61E	5.23	0.51	10	16.65	33.61	5.23	(0.51)	24.55	340	0.03
23	16.61	33.66E	5.18	-	20	16.62	33.65	5.20	(0.51)	24.59	337	0.07
46	16.42	33.69E	5.34	0.50	30	16.56	33.67	5.20	(0.50)	24.62	334	0.10
69	15.14	33.66E	5.36	0.58	50	16.33	33.69	5.35	0.50	24.68	328	0.17
91	12.85	33.51E	4.43	1.00	75	14.52	33.63	5.30	0.64	25.04	295	0.25
138	10.34	-	2.99	1.84	100	12.18	33.53	3.97	1.27	25.43	258	0.32
181	9.30	34.12E	2.48	-	150	9.93	33.94	2.83	(1.90)	26.16	190	0.43
265	8.69	34.34E	1.07	2.72	200	9.12	34.19	2.18	(2.25)	26.49	159	0.52
353	7.71	34.52E	0.53	2.97	250	8.78	34.31	1.26	(2.64)	26.63	146	0.59
438	6.88	34.39E	0.31	3.13	300	8.35	34.42	0.82	2.84	26.79	132	0.66
528	6.27	34.46E	0.24	3.26	400	7.23	34.44	0.40	3.06	26.97	116	0.79
709	5.12	34.44E	0.30	3.29	500	6.45	34.43	0.25	3.22	27.06	108	0.90
890	4.49	34.51E	0.40	3.31	600	5.81	34.47	0.25	3.28	27.18	98	1.00
1088	3.83	34.50E	0.66	-	700	5.17	34.44	0.29	3.29	27.23	93	1.10
					800	4.76	34.47	0.34	3.30	27.30	86	1.19
					1000	4.15	34.51	0.53		27.40	78	1.36
133.50	HORIZON; April 14, 1951; 1435 GCT; 25°20'N, 114°34'W; sounding, 2000 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 28°.											
0	-	33.64E	4.75	0.53	0	(17.50)	33.64	4.75	0.53	(24.37)	(356)	(0.00)
9	17.52	33.71E	4.68	0.53	10	17.53	33.73	4.66	0.53	24.43	351	0.04
22	17.54	33.79E	4.61	0.55	20	17.54	33.79	4.61	0.55	24.48	347	0.07
49	17.52	33.76E	4.84	0.54	30	17.54	33.79	4.65	0.55	24.48	348	0.11
71	17.38	33.78E	4.79	0.52	50	17.50	33.76	4.84	0.54	24.46	349	0.18
97	15.81	33.58E	4.95	0.57	75	17.36	33.78	4.80	0.52	24.51	345	0.26
144	11.66	-	3.47	1.49	100	15.25	33.57	4.93	0.60	24.84	315	0.35
189	10.96	34.22E	1.66	-	150	11.51	33.69	3.20	(1.64)	25.68	235	0.48
275	9.38	34.23E	1.26	2.64	200	10.80	34.22	1.61		26.22	185	0.59
364	8.08	34.36E	0.70	2.94	250	9.90	34.23	1.38		26.39	170	0.68
452	7.73	34.45E	0.19	3.16	300	8.93	34.24	1.14	2.72	26.55	155	0.76
538	6.72	-	0.18	3.25	400	7.90	34.42	0.46	3.04	26.85	127	0.90
713	5.33	34.45E	0.26	3.27	500	7.29	(34.45)	0.18	3.21	(26.97)	(118)	(1.03)
896	4.48	34.42E	0.38	-	600	6.13	(34.46)	0.20	3.26	(27.13)	(103)	(1.14)
1086	3.90	34.50E	0.57	3.28	700	5.42	(34.45)	0.25	3.27	(27.21)	(95)	(1.24)
					800	4.90	34.46	0.30	3.28	27.28	89	(1.33)
					1000	4.12	34.47	0.47	3.28	27.37	81	(1.50)
133.60	HORIZON; April 14, 1951; 0915 GCT; 24°57'N, 115°07'W; sounding, 2070 fm; wind, 360°, force 3; weather, overcast; sea, rough; wire angle, 15°.											
0	-	33.70E	5.17	0.47	0	(17.76)	33.70	5.17	0.47	(24.36)	(358)	(0.00)
10	17.76	33.77E	5.21	0.48	10	17.76	33.77	5.21	0.48	24.41	353	0.04
24	17.83	33.73E	5.13	0.50	20	17.81	33.74	5.14	0.50	24.37	357	0.07
48	17.74	33.82E	5.16	-	30	17.83	33.73	5.13	0.50	24.36	359	0.11
72	16.64	33.66E	5.27	0.49	50	17.73	33.82	5.18	0.49	24.45	350	0.18
96	15.70	33.60E	5.20	0.53	75	16.50	33.64	5.26	0.49	24.63	334	0.26
146	11.58	33.72E	3.92	1.35	100	15.60	33.60	5.16	0.54	24.94	306	0.35
191	10.64	34.20E	1.93	-	150	11.40	33.76	3.68		25.76	228	0.48
281	10.49	34.46E	0.43	-	200	10.59	34.25	1.68		26.28	179	0.59
377	8.98	34.49E	0.22	2.92	250	10.49	34.43	0.72		26.44	165	0.67
468	7.80	34.38E	0.19	3.08	300	10.36	34.48	0.35		26.50	160	0.75
564	6.80	34.39E	0.18	3.17	400	8.60	34.47	0.21	2.95	26.79	134	0.90
754	5.46	34.45E	0.22	3.29	500	7.46	34.38	0.19	3.12	26.89	126	1.03
942	4.50	34.48E	0.34	3.42	600	6.50	34.40	0.19	3.19	27.04	112	1.15
1145	3.86	34.58E	0.58	3.27	700	5.80	34.43	0.20	3.24	27.15	102	1.26
					800	5.20	34.46	0.25	3.34	27.24	93	1.36
					1000	4.28	34.50	0.41	3.40	27.38	80	1.54

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
HORIZON; April 17, 1951; 0050 GCT; 25°10'N, 113°11.5'W; sounding, 900 fm; wind, 320°, force 4; weather, cloudy; sea, high; wire angle, 37°.												137.35
0	17.34	33.72E	5.36	0.49	0	17.34	33.72	5.36	0.49	24.47	347	0.00
8	17.27	33.66E	5.43	0.51	10	17.25	33.66	5.43	0.51	24.45	350	0.03
20	17.11	33.72E	5.36	0.51	20	17.11	33.72	5.36	0.51	24.53	342	0.07
44	16.70	33.68E	5.50	0.49	30	16.94	33.71	5.40	0.50	24.56	340	0.10
63	14.18	33.48E	5.55	0.60	50	16.50	33.63	5.53	0.49	24.60	336	0.17
86	12.62	33.61E	4.23	1.13	75	13.18	33.50	5.31	0.90	25.22	278	0.25
125	11.42	34.04E	1.87	2.08	100	12.15	33.81	3.37	1.86	25.66	237	0.31
166	10.11	34.12E	1.93	2.17	150	10.69	34.11	2.15	2.13	26.16	190	0.42
247	8.81	34.28E	1.99	2.51	200	9.38	34.15	1.52	2.28	26.41	166	0.51
335	8.43	34.42E	0.42	2.91	250	8.78	34.29	1.00	2.52	26.62	148	0.59
422	7.30	34.38E	0.42	-	300	8.55	34.38	0.61	2.78	26.72	138	0.66
509	7.04	34.51E	0.24	3.15	400	7.56	34.39	0.42	3.04	26.88	125	0.79
690	5.70	34.48E	0.21	-	500	7.07	34.50	0.25	3.14	27.04	111	0.91
883	4.56	34.59E	0.38	3.22	600	6.48	34.50	0.22	(3.20)	27.12	104	1.02
1081	3.82	34.81E	0.60	-	700	5.63	(34.48)	0.22	(3.21)	(27.21)	(96)	(1.12)
					800	5.00		0.30	(3.22)			
					1000	4.10		0.50				
HORIZON; April 17, 1951; 0356 GCT; 25°03'N, 113°27.5'W; sounding, 1900 fm; wind, 320°, force 6; weather, partly cloudy; sea, confused; wire angle, 20°.												137.40
0	17.07	33.70E	5.11	0.54	0	17.07	33.70	5.11	0.54	24.52	342	0.00
10	17.04	33.65E	5.08	0.54	10	17.04	33.65	5.08	0.54	24.49	346	0.03
28	17.04	33.65E	5.19	0.54	20	17.04	33.65	5.10	0.54	24.49	346	0.07
56	16.88	33.65E	5.22	0.51	30	17.03	33.65	5.20	0.54	24.49	346	0.10
84	13.56	33.44E	4.83	0.76	50	16.93	33.65	5.22	0.52	24.52	344	0.17
111	12.00	34.04E	3.95	1.23	75	16.00	33.53	5.00	0.62	24.64	333	0.26
164	10.82	-	1.93	2.26	100	12.50	33.87	4.37	1.06	25.64	239	0.33
218	9.96	34.42E	0.97	-	150	11.10	34.29	2.45	2.08	26.22	184	0.44
322	8.46	34.42E	0.54	3.02	200	10.23	34.41	1.19	(2.58)	26.47	161	0.52
423	7.33	34.40E	0.39	3.10	250	9.50	34.43	0.77	(2.83)	26.61	149	0.60
528	6.30	34.46E	-	3.22	300	8.76	34.42	0.59	(2.98)	26.72	139	0.67
629	6.00	34.46E	0.21	3.33	400	7.54	34.40	0.43	3.09	26.89	124	0.81
843	4.76	34.53E	0.34	3.33	500	6.55	34.44	0.30	3.17	27.06	108	0.92
1054	3.97	34.50E	0.56	3.32	600	6.07	34.46	0.22	3.31	27.14	102	1.03
1266	3.38	34.66E	0.86	3.24	700	5.70	34.48	0.24	3.33	27.20	97	1.13
					800	5.06	34.53	0.30	3.33	27.32	86	1.22
					1000	4.12	34.49	0.50	3.33	27.39	79	1.39
HORIZON; April 17, 1951; 1002 GCT; 24°40.5'N, 114°01.5'W; sounding, 2000 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 19°.												137.50
0	17.77	33.78E	5.15	-	0	17.77	33.78	5.12		24.42	352	0.00
10	17.74	33.75E	5.10	0.66	10	17.74	33.75	5.10	0.66	24.40	354	0.04
24	17.75	33.97E	5.10	0.63	20	17.75	33.80	5.10	0.64	24.43	351	0.07
52	17.71	33.84E	5.15	-	30	17.75	33.96	5.10	(0.64)	24.56	340	0.11
76	16.52	33.68E	5.45	-	50	17.71	33.85	5.13	(0.66)	24.49	347	0.17
103	14.33	33.79E	5.04	0.77	75	16.80	33.68	5.45	(0.70)	24.57	340	0.26
145	11.16	33.96E	2.72	2.06	100	14.55	33.75	5.13	0.76	25.12	287	0.34
194	11.84	34.64E	0.55a)	-	150	11.15	34.01	2.25		26.00	205	0.46
293	10.27	34.55E	0.44a)	-	200	11.81	34.64	0.55		26.36	172	0.56
396	8.97	34.56E	0.26	-	250	10.93	34.59	0.51		26.49	161	0.64
498	7.72	34.57E	0.19	3.18	300	10.17	34.55	0.42		26.59	152	0.72
598	6.40	34.46E	0.24	3.29	400	8.89	34.56	0.26		26.81	132	0.86
796	5.26	34.54E	0.23	-	500	7.67	34.57	0.20		27.03	112	0.99
1001	4.34	34.59E	0.43	3.42	600	6.39	34.46	0.25		27.10	106	1.10
1202	3.67	34.60E	0.74	3.35	700	5.80	34.49	0.23		27.20	97	1.20
					800	5.22	34.54	0.23		27.31	87	1.29
					1000	4.35	34.59	0.43		27.44	75	1.46

a) Oxygen samples at 194 and 293 meters appear to have been reversed; they are assumed to be listed in correct order.

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137.60

HORIZON; April 17, 1951; 1544 GCT; 24°22'N, 114°38'W; sounding, 1900 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 26°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m
0	17.60	33.81E	5.03	0.55	0	17.60	33.81	5.03	0.55	24.48	346	0.00
9	17.58	33.68E	5.16	0.54	10	17.58	33.68	5.16	0.54	24.38	356	0.04
27	17.59	33.76E	5.23	0.56	20	17.59	33.72	5.20	0.55	24.41	354	0.07
54	17.26	33.69E	5.36	0.56	30	17.57	33.76	5.25	0.56	24.45	350	0.11
80	15.41	33.77E	5.28	-	50	17.35	33.70	5.35	0.56	24.45	350	0.18
107	13.79	33.93E	3.92	1.23	75	15.67	33.73	5.31	0.70	24.86	312	0.26
159	11.32	34.15E	1.96	2.33	100	14.23	33.89	4.40	1.10	25.30	271	0.33
211	11.14	34.60E	0.87	-	150	11.39	34.11	2.20	2.25	26.03	202	0.45
314	9.63	34.60E	0.45	2.72	200	11.16	34.58	1.07	(2.42)	26.44	165	0.54
413	8.52	34.50E	0.22	3.08	250	10.76	34.61	0.60	(2.55)	26.53	157	0.63
518	7.41	34.57E	0.19	3.22	300	9.91	34.60	0.46	(2.68)	26.67	144	0.70
618	6.36	34.47E	0.19	-	400	8.64	34.50	0.25	3.04	26.80	133	0.84
828	5.05	34.60E	0.29	3.38	500	7.63	34.57	0.20	3.19	27.01	114	0.96
1035	4.19	34.51E	0.43	3.38	600	6.52	34.47	0.19	(3.30)	27.09	107	1.08
1247	3.58	34.60E	0.70	3.36	700	5.75	34.51	0.24	(3.36)	27.22	95	1.18
					800	5.19	34.59	0.27	(3.38)	27.35	83	1.27
					1000	4.32	34.52	0.40	3.38	27.39	79	1.43

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

60.60

BLACK DOUGLAS; May 3, 1951; 0840 GCT; 37°37'N, 123°37'W; sounding, 1860 fm; wind, 150°, force 5; weather, overcast; sea, very rough; wire angle, 05°.

0	10.74		6.40	0.81	0	10.74	6.40	0.81
10	10.73	32.77	6.48	0.80	10	10.73	6.48	0.80
25	10.72		6.46	-	20	10.72	6.48	0.84
49	9.60		5.70	1.35	30	10.70	6.39	1.05
73	9.26		5.43	1.49	50	9.58	5.70	1.36
97	8.76		4.00	1.90	75	9.21	5.40	1.51
149	8.28		2.65	-	100	8.72	3.79	1.93
197	7.82		2.33	2.32	150	8.27	2.63	2.18
293	7.04		1.49	2.63	200	7.77	2.31	2.34
393	6.14		1.11	-	250	7.36	1.97	2.50
488	5.72		0.67	-	300	6.98	1.45	
590	5.16		0.45	3.26	400	6.10	1.06	
789	4.46		0.33	-	500	5.66	0.62	
					600	5.12	0.41	
					700	4.75	0.35	
					800	(4.44)		

60.70

BLACK DOUGLAS; May 3, 1951; 1503, 1728 GCT; 37°17'N, 124°21'W; sounding, 2220 fm; wind, 160°, force 4; weather, cloudy; sea, very rough; wire angle, 21°, 21°.

0	10.53		6.34	0.99	0	10.53	6.34	0.99
10	10.54	33.10	6.58	0.92	10	10.54	6.58	0.92
23	10.34		6.48	1.04	20	10.42	6.53	1.00
52	9.92		5.67	1.34	30	10.21	6.30	1.12
75	9.26		4.68	1.64	50	9.95	5.76	1.31
103	9.12		3.36	2.03	75	9.26	4.68	1.64
152	8.46		2.43	2.28	100	9.13	3.50	1.99
201	7.86		2.14	2.48	150	8.49	2.48	2.27
297	6.69		1.43	2.78	200	7.88	2.15	2.47
398	5.64		0.97	-	250	7.27	1.82	2.64
495	5.36		0.50	3.15	300	6.66	1.41	2.79
594	5.04		0.38	-	400	5.63	0.96	3.02
790	4.32		0.33	-	500	5.35	0.48	(3.15)
994	3.84		0.55	-	600	5.06	0.46	
1195	3.28		0.66	-	700	4.67	0.35	
					800	4.30	0.34	
584a)	5.14		0.56	-	1000	3.81	0.56	
939	3.97		0.48	-	1200	3.28	0.66	
1119	3.48		0.89u	-	1500	2.74	1.01	3.14
1393	2.92		0.87	3.20	2000	2.00	1.57	3.00
1622	2.51		0.59r	3.08	2500	1.76	2.18	2.86
1853	2.12		1.42	3.04				
2087	1.95		1.64	-				
2323	1.81		1.97	2.90				
2568	1.74		2.25	2.84				
2815	1.66		2.44	2.72				

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
60.80	BLACK DOUGLAS; May 4, 1951; 0149 GCT; 36°57'N, 125°04'W; sounding, 2260 fm; wind, 180°, force 6; weather, cloudy; sea, very rough; wire angle, 06°.							
0	12.08		6.21	0.66	0	12.08	6.21	0.66
10	12.08	32.74	6.13	0.66	10	12.08	6.13	0.66
25	11.86		6.19	0.63	20	11.95	6.17	0.63
49	11.24		6.15	0.73	30	11.72	6.19	0.64
74	9.98		5.71	-	50	11.18	6.13	0.73
98	8.68		5.12	1.44	75	9.95	5.69	1.04
152	8.12		3.74	-	100	8.63	5.08	1.46
200	7.48		3.10	2.14	150	8.14	3.77	1.93
293	6.41		2.20	-	200	7.48	3.10	2.14
391	5.41		1.40	-	250	6.88	2.59	(2.35)
486	4.84		0.89	3.15	300	6.35	2.13	(2.55)
585	4.96		0.39	3.28	400	5.32	1.35	(2.90)
780	4.32		0.50	-	500	4.85	0.81	3.17
977	3.80		0.54	3.31	600	4.92	0.40	(3.29)
1181	3.34		0.77	3.32	700	4.62	0.44	(3.30)
					800	4.25	0.50	(3.31)
					1000	3.75	0.54	3.31
60.90	BLACK DOUGLAS; May 4, 1951; 1106 GCT; 36°37'N, 125°47'W; sounding, 2000 fm; wind, 220°, force 6; weather, clear; sea, very rough; wire angle, 00°.							
0	11.64		6.18	0.68	0	11.64	6.18	0.68
10	11.61		6.08	0.72	10	11.61	6.08	0.72
25	11.56		6.30	0.76	20	11.58	6.24	0.74
50	11.14		6.30	0.82	30	11.53	6.30	0.76
74	10.33		5.96	1.17	50	11.14	6.30	0.82
99	9.15		5.06	1.66	75	10.30	5.93	1.19
152	8.61		3.26	-	100	9.12	5.00	1.66
200	8.20		2.47	2.34	150	8.63	3.29	2.18
					200	8.20	2.47	2.34
60.100	BLACK DOUGLAS; May 4, 1951; 2020 GCT; 36°17'N, 126°30'W; sounding, 2560 fm; wind, 220°, force 3; weather, cloudy; sea, very rough; wire angle, 02°.							
0	12.57		5.75	0.58	0	12.57	5.75	0.58
10	12.43	32.77	5.68	0.56	10	12.43	5.68	0.56
25	12.32		5.98	0.58	20	12.33	5.95	0.57
50	12.23		5.78	0.60	30	12.31	5.98	0.58
74	10.84		5.41	1.01	50	12.23	5.78	0.60
99	9.42		4.33	1.58	75	10.80	5.41	1.06
					100	(9.39)	(4.37)	(1.59)

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; May 5, 1951; 0218, 0236, 0434 GCT; 35°57'N, 127°12'W; sounding, 2640 fm; wind, 240°, force 2; weather, overcast; sea, rough; wire angle, 10°, 10°, 07°.								60.110
0	12.80		5.84	0.56	0	12.80	5.84	0.56
10	12.61	32.81	5.89	0.54	10	12.61	5.89	0.54
25	12.47		6.05	0.58	20	12.50	6.02	0.55
49	11.18		5.89	0.80	30	12.43	6.05	0.62
74	9.68		5.14	1.31	50	11.15	5.87	0.81
98	8.42		4.86	1.54	75	9.60	5.13	1.33
					100	8.39	4.83	1.56
151	8.24		3.38	1.98	150	8.24	3.38	1.97
197	7.60		3.14	2.18	200	7.56	3.13	2.19
289	6.58		2.26	2.34	250	6.99	2.75	2.29
387	6.20		1.15	2.77	300	6.50	2.12	2.36
480	5.54		0.73	-	400	6.15	1.04	2.80
578	4.97		0.50	3.12	500	5.42	0.67	2.99
769	4.46		0.38	3.23	600	4.86	0.47	3.14
958	3.82		0.56	3.20	700	4.61	0.40	3.20
					800	4.37	0.39	3.23
595a)	4.73		0.48	-	1000	3.77	0.57	3.24
1016	3.72		0.57	3.26	1200	3.23	0.76	3.20
1204	3.23		0.76	-	1500	2.70	1.15	3.13
1486	2.74		1.15	3.13	2000	2.02	1.59	3.06
1964	2.06		1.55	3.06				
2205	1.90		1.87	3.00				
BLACK DOUGLAS; May 2, 1951; 0004 GCT; 37°37'N, 123°07.5'W; sounding, 520 fm; wind, 280°, force 2; weather, partly cloudy; sea, rough; wire angle, 03°.								61.55
0	11.09		5.77	1.38	0	11.09	5.77	1.38
10	10.18		5.65	-	10	10.18	5.65	1.39
25	10.09		5.44	1.37	20	10.13	5.53	1.37
50	8.94		3.85	2.04	30	10.05	5.33	1.52
75	8.78		2.76	2.23	50	8.94	3.85	2.04
100	8.62		2.35	2.35	75	8.78	2.76	2.23
153	8.22		1.99	-	100	8.62	2.35	2.35
200	7.76		1.92	2.41	150	8.22	1.99	2.39
296	6.70		1.17	-	200	7.76	1.92	2.41
396	6.06		0.70	3.09	250	7.15	1.62	2.58
492	5.57		0.56	3.18	300	6.67	1.13	2.86
593	5.07		0.44	3.31	400	6.03	0.68	3.10
690	4.74		0.45	-	500	5.53	0.55	3.18
794	4.32		0.36	-	600	5.04	0.45	(3.31)
					700	4.70	0.44	
					800	(4.29)	(0.36)	
BLACK DOUGLAS; May 2, 1951; 0522 GCT; 37°09'N, 122°58'W; sounding, 320 fm; wind, calm; weather, partly cloudy; sea, rough; wire angle, 00°.								63.57
0	11.06		5.70	0.98b)	0	11.06	5.70	0.98
10	10.80	33.10	3.69	0.98	10	10.80	5.69	0.98
25	10.60		5.75	1.06	20	10.65	5.75	1.01
50	9.16		3.92	1.88	30	10.57	5.73	1.14
74	8.94		3.05	2.02	50	9.16	3.92	1.88
98	8.83		2.51	2.12	75	8.92	3.00	2.02
123p	8.76		2.32	2.15	100	8.82	2.49	2.11
171p	8.30		1.96	2.30	150	8.53	2.08	2.22
231p	7.68		1.76	2.51	200	7.99	1.90	2.41
268p	7.25		1.29	2.68	250	7.41	1.49	2.61
317p	7.02		1.03	2.80	300	7.10	1.10	2.75
368p	6.76		0.83	2.92	400	6.56	0.75	3.01
422p	6.40		0.69	3.06				
466p	5.87		0.59	3.13				

a) Overlapping casts; reconciliation of property curves when necessary.

b) Phosphate samples from 0 to 171 meters appear to have been reversed; they are assumed to be listed in correct order.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
63.67	BLACK DOUGLAS; May 3, 1951; 0123 GCT; 36°49'N, 123°41'W; sounding, 2040 fm; wind, 160°, force 4; weather, overcast; sea, rough; wire angle, 08°.							
0	11.53		6.61	-	0	11.53	6.61	
10	11.50		6.41	0.70	10	11.50	6.41	0.70
30	10.81		6.45	-	20	11.30	6.41	
60	9.24		4.94	-	30	10.81	6.45	
89	8.96		4.18	-	50	9.89	5.40	
118	8.28		3.43	2.01	75	9.07	4.48	
175	7.84		3.33	1.98	100	8.77	3.92	
232	7.12		2.43	2.24	150	8.02	3.38	2.02
344	6.25		1.21	3.22	200	7.55	3.08	2.03
452	5.64		0.73	3.26	250	6.93	2.12	2.54
565	5.17		0.43	-	300	6.55	1.54	3.12
673	4.77		0.30	3.31	400	5.92	0.93	3.25
896	3.90		0.38	3.16	500	5.43	0.57	3.27
1112	3.42		0.69	2.98	600	5.05	0.36	3.28
1325	3.02		0.94	-	700	4.66	0.30	3.30
					800	4.27	0.34	3.23
					1000	3.63	0.50	3.08
67.55	BLACK DOUGLAS; May 2, 1951; 1119 GCT; 36°39'N, 122°26'W; sounding, 1120 fm; wind, calm; weather, partly cloudy; sea, rough; wire angle, 07°.							
0	12.07		6.20	0.76	0	12.07	6.20	0.76
10	11.92	32.95	6.18	0.76	10	11.92	6.18	0.76
25	11.74		6.15	0.78	20	11.80	6.18	0.77
50	10.38		5.36	-	30	11.65	6.05	0.80
74	9.86		4.51	1.68	50	10.38	5.36	1.42
98	9.38		3.54	-	75	9.86	4.46	1.69
150	8.62		2.58	2.30	100	9.37	3.48	2.05
197	8.20		2.05	-	150	8.62	2.58	2.30
290	7.30		1.56	2.80	200	8.17	2.03	2.48
389	6.72		0.98	3.10	250	7.70	1.74	2.67
483	6.18		0.54	3.19	300	7.24	1.52	2.83
582	5.36		0.45	-	400	6.66	0.90	3.10
776	4.33		0.31	3.42	500	6.06	0.50	(3.21)
969	3.93		0.53	-	600	5.24	0.43	
1170	3.32		0.70	-	700	4.70	0.33	
					800	4.25	0.33	
					1000	3.86	0.59	
67.65	BLACK DOUGLAS; May 2, 1951; 1808 GCT; 36°19'N, 123°09'W; sounding, 1770 fm; wind, 160°, force 2; weather, overcast; sea, rough; wire angle, 05°.							
0	12.27		6.17	-	0	12.27	6.17	
10	11.86	32.95	6.28	0.76	10	11.86	6.28	0.76
25	11.58		6.17	0.82	20	11.67	6.26	0.78
50	9.74		4.94	-	30	11.47	5.97	0.94
75	8.93		3.87	1.93	50	9.74	4.94	1.79
99	8.64		3.75	-	75	8.93	3.87	1.93
153	7.87		3.28	2.16	100	8.64	3.75	2.01
200	7.61		2.47	-	150	7.88	3.34	2.14
295	6.53		1.89	2.70	200	7.61	2.47	2.37
394	5.74		1.09	3.04	250	7.12	2.18	2.53
490	5.36		0.61	-	300	6.48	1.86	2.72
590	4.74		0.50	-	400	5.72	1.04	(3.05)
786	4.31		0.41	3.33	500	5.31	0.58	
979	3.82		0.55	-	600	4.70	0.50	
1182	3.33		0.78	-	700	4.46	0.45	
					800	4.29	0.42	
					1000	3.77	0.57	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; May 7, 1951; 1336 GCT; 36°03'N, 122°02'W; sounding, 760 fm; wind, 320°, force 7; weather, partly cloudy; sea, rough; wire angle, 10°.								70.55
0	12.16		5.86	0.98	0	12.16	5.86	0.98
10	12.14	33.28	6.05	-	10	12.14	6.05	1.00
25	11.01		5.58	1.20	20	11.64	5.87	1.09
49	10.08		4.49	-	30	10.75	5.22	1.30
73	9.36		3.62	1.89	50	10.03	4.47	1.69
97	9.00		2.96	-	75	9.32	3.53	(1.90)
151	8.48		2.39	2.22	100	8.97	2.92	(1.99)
197	8.10		2.05	2.38	150	8.49	2.40	(2.21)
291	7.20		1.35	2.74	200	8.07	2.02	2.39
391	6.60		0.79	2.95	250	7.61	1.67	2.55
486	6.14		0.71	3.22	300	7.13	1.28	2.77
585	5.49		0.41	3.32	400	6.56	0.77	2.96
780	4.73		0.48	3.18	500	6.07	0.66	3.24
975	4.04		0.44	3.21	600	5.41	0.40	3.31
1179	3.49		0.72	3.18	700	5.00	0.44	3.20
					800	4.67	0.46	3.18
					1000	3.97	0.46	3.22
BLACK DOUGLAS; May 7, 1951; 0745, 0839 GCT; 35°53'N, 122°23'W; sounding, 1780 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 09°, 10°.								70.60
0	12.79		6.10	0.58	0	12.79	6.10	0.58
10	12.75	32.99	6.25	0.61	10	12.75	6.25	0.61
25	12.40		6.16	0.69	20	12.58	6.25	0.65
54	10.17		5.00	1.43	30	12.04	6.05	0.72
79	9.64		3.87	1.82	50	10.47	5.20	1.12
108	9.00		3.25	2.02	75	9.72	3.96	1.78
160	8.47		2.39	2.03	100	9.17	3.42	1.99
211	7.88		2.48	2.38	150	8.56	2.46	2.03
314	6.77		1.83	2.54	200	8.02	2.46	2.33
					250	7.42	2.29	2.43
426	6.40		0.79	2.90	300	6.92	1.93	2.51
529	5.65		0.59	3.06	400	6.46	0.97	2.81
634	5.19		0.34	3.17	500	5.82	0.68	3.00
839	4.45		0.45	3.09	600	5.33	0.38	3.16
1048	3.75		0.63	3.03	700	4.93	0.35	3.15
1253	3.22		0.79	2.96	800	4.58	0.42	3.11
					1000	3.90	0.60	3.05
BLACK DOUGLAS; May 7, 1951; 0026 GCT; 35°33'N, 123°06'W; sounding, 2140 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 19°.								70.70
0	14.05		6.07	-	0	14.05	6.07	
10	14.04	33.13	6.09	0.52	10	14.04	6.09	0.52
24	13.32		6.01	0.51	20	13.53	6.05	0.51
52	12.20		5.88	0.76	30	13.25	5.98	0.52
75	10.21		4.37	1.52	50	12.60	5.90	0.71
102	9.10		2.97	1.93	75	10.21	4.37	1.52
151	8.49		2.37	2.18	100	9.18	3.04	1.91
200	7.95		1.92	2.32	150	8.50	2.38	2.18
298	7.19		1.19	2.74	200	7.95	1.92	2.32
402	6.42		0.77	3.01	250	7.56	1.45	2.44
500	5.52		0.58	3.11	300	7.18	1.17	2.75
600	5.09		0.43	3.18	400	6.43	0.78	3.01
794	4.37		0.40	3.21	500	5.52	0.58	3.11
993	3.78		0.61	3.23	600	5.09	0.43	3.18
1188	3.30		0.82	3.10	700	4.74	0.40	3.20
					800	4.36	0.40	3.21
					1000	3.77	0.62	3.23

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	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
70.80	BLACK DOUGLAS; May 6, 1951; 1724 GCT; 35°13'N, 123°48'W; sounding, 2260 fm; wind, 310°, force 3; weather, partly cloudy; sea, moderate; wire angle, 17°.								
	0	13.25		6.09	0.70	0	13.25	6.09	0.70
	10	13.17	33.03	6.00	0.67	10	13.17	6.00	0.67
	24	12.60		6.16	-	20	12.78	6.15	0.67
	47	10.24		5.33	1.26	30	12.47	6.13	0.71
	71	8.66		4.32	1.78	50	9.80	5.24	1.47
	94	8.76		3.63	1.95	75	8.68	4.17	1.82
	144	8.24		2.85	2.20	100	8.76	3.50	1.98
	189	7.42		3.32u	-	150	8.10		(2.22)
	279	6.62		1.79	2.66	200	7.25		(2.48)
	374	5.98		1.07	2.99	250	6.82		(2.58)
	464	5.37		0.65	-	300	6.51	1.64	2.74
	559	4.94		0.49	3.22	400	5.80	0.91	3.06
	744	4.57		0.42	3.26	500	5.18	0.56	3.19
	930	3.94		0.61	3.26	600	4.82	0.45	3.24
	1129	3.40		0.76	3.20	700	4.63	0.41	3.26
						800	4.43	0.50	3.26
						1000	3.71	0.68	3.25
70.90	BLACK DOUGLAS; May 6, 1951; 1117 GCT; 34°53'N, 124°30'W; sounding, 2420 fm; wind, 290°, force 3; weather, partly cloudy; sea, moderate; wire angle, 13°.								
	0	13.40		5.81	0.48	0	13.40	5.81	0.48
	10	13.39	32.81	5.84	0.60	10	13.39	5.84	0.60
	24	12.52		5.88	0.58	20	12.80	5.87	0.59
	53	11.16		6.13	-	30	12.27	5.99	(0.58)
	77	10.32		5.58	1.04	50	11.50	6.13	(0.79)
	107	9.12		4.37	-	75	10.40	5.69	(1.01)
	158	8.40		3.14	2.10	100	9.42	4.58	1.49
	208	7.72		2.57	2.30	150	8.51	3.27	2.07
	309	6.73		1.41	-	200	7.83	2.66	2.27
	414	6.24		0.83	3.06	250	7.29	2.12	(2.49)
	515	5.44		0.55	-	300	6.83	1.53	(2.69)
	617	5.01		0.40	3.28	400	6.29	0.88	(3.02)
	818	4.28		0.38	3.34	500	5.52	0.58	3.20
	1024	3.70		0.66	3.24	600	5.09	0.42	3.27
	1226	3.21		0.85	3.20	700	4.72	0.38	3.32
						800	4.35	0.39	3.34
						1000	3.76	0.62	3.26
70.100	BLACK DOUGLAS; May 6, 1951; 0339 GCT; 34°33'N, 125°12'W; sounding, 2500 fm; wind, 290°, force 2; weather, cloudy; sea, moderate; wire angle, 11°.								
	0	14.66		5.83	0.55	0	14.66	5.83	0.55
	10	14.27	33.03	5.84	0.58	10	14.27	5.84	0.58
	25	14.18		5.79	0.60	20	14.20	5.80	0.60
	49	14.16		5.64	0.64	30	14.17	5.77	0.61
	73	13.64		5.81	0.63	50	14.15	5.65	0.64
	96	10.67		5.52	1.06	75	13.52	5.79	0.63
	148	9.01		4.58	1.68	100	10.50	5.43	1.13
	194	8.15		3.73	-	150	8.93	4.55	(1.72)
	287	6.96		2.83	-	200	8.05	3.64	
	386	6.08		1.45	2.79	250	7.38	3.09	
	479	5.26		0.95	3.05	300	6.83	2.75	
	576	4.99		0.46	3.14	400	5.95	1.34	2.86
	768	4.34		0.38	-	500	5.19	0.79	3.07
	957	3.78		0.45	3.25	600	4.94	0.44	(3.16)
	1155	3.35		0.79	3.18	700	4.61	0.38	(3.21)
						800	4.24	0.40	(3.24)
						1000	3.63	0.51	3.24

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

BLACK DOUGLAS; May 5, 1951; 1939 GCT; 34°13'N, 125°54'W; sounding, 2180 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 06°. 70.110

0	14.28		4.92	0.50	0	14.28	4.92	0.50
10	13.74	32.78	5.63	0.48	10	13.74	5.63	0.48
25	13.67		5.75	0.50	20	13.68	5.74	0.49
49	13.67		5.72	0.54	30	13.67	5.75	0.51
74	12.58		5.75	0.60	50	13.67	5.73	0.55
97	10.44		5.18	1.14	75	12.58	5.75	0.61
150	9.81		3.11	2.00	100	10.40	5.09	1.22
196	9.24		2.56	-	150	9.81	3.11	2.00
290	8.22		1.99	2.50	200	9.19	2.53	2.24
					250	8.64	2.18	2.39
					300	(8.13)	(1.94)	(2.52)

BLACK DOUGLAS; May 5, 1951; 2115 GCT;[a] 34°13'N, 125°54'W; sounding, 2180 fm; wind, 300°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°. 70.110

659	5.20
684	5.12
708	4.98
732	4.90
757	4.70
780	4.50
805	4.38
830	4.34
854	4.30
879	4.20
903	4.15
928	4.09
953	4.06
978	3.98
1003	3.92

BLACK DOUGLAS; May 7, 1951; 2011, 2040 GCT; 35°35.5'N, 121°20'W; sounding, 165 fm; wind, 280°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°, 16°. 73.51

0	11.02		5.28	1.38	0	11.02	5.28	1.38
10	10.63	33.53	4.90	1.48	10	10.63	4.90	1.48
24	9.96		3.91	1.76	20	10.50	4.25	1.70
49	9.00		2.79	-	30	9.57	3.52	(1.86)
73	8.66		2.11	-	50	8.96	2.72	(2.13)
					75	8.63	2.08	(2.30)
146	8.34		1.88	2.44	100	8.46	2.05	(2.32)
194	7.88		1.48	2.66	150	8.32	1.82	2.46
242	7.60		1.28	2.65	200	7.82	1.45	2.66
					250	(7.57)		

a) Test cast.

SIO

CCOFI
5105

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
73.61	BLACK DOUGLAS; May 8, 1951; 0502 GCT; 35°16'N, 122°02.5'W; sounding, 1660 fm; wind, 280°, force 4; weather, clear; sea, rough; wire angle, 08°.							
0	13.44		6.16	-	0	13.44	6.16	
10	13.42	33.04	6.20	-	10	13.42	6.20	
25	12.82a)		6.08	0.60	20	13.42	6.14	
49	11.08		5.42	1.14	30	12.78	5.98	0.62
73	9.83		4.36	1.56	50	11.08	5.31	1.15
97	9.38		3.74	-	75	9.75	4.30	1.60
150	8.53		2.68	2.15	100	9.33	3.64	1.89
197	8.05		2.27	2.35	150	8.53	2.68	2.15
291	7.03		1.49	2.61	200	8.02	2.26	2.36
391	5.86		1.04	2.84	250	7.49	1.82	2.51
486	5.48		0.70	3.02	300	6.93	1.43	2.64
586	5.20		0.44	3.11	400	5.79	1.02	2.86
782	4.58		0.51	3.16	500	5.44	0.65	3.04
974	3.89		0.94	-	600	5.16	0.45	3.12
1178	3.44		0.87	-	700	4.84	0.47	3.15
					800	4.52	0.53	
					1000	3.82	0.70	
77.55	BLACK DOUGLAS; May 8, 1951; 2005 GCT; 34°54.5'N, 121°13'W; sounding, 320 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 16°.							
0	11.8		5.75	1.09	0	11.8	5.75	1.09
10	11.81	33.33	5.80	1.11	10	11.81	5.80	1.11
24	11.56		5.68	1.20	20	11.60	5.75	1.16
48	10.34		4.87	1.50	30	11.55	5.51	1.30
71	9.57		3.78	-	50	10.25	4.73	1.52
94	9.28		3.24	2.06	75	9.51	3.63	2.00
145	8.68		2.73	2.21	100	9.20	3.15	2.08
191	7.94		2.62	2.24	150	8.60	2.69	2.22
237	7.82		1.81	2.55	200	7.89	2.55	2.26
284	7.36		1.34	2.81	250	7.76	1.69	2.64
336	6.88		0.91	2.99	300	7.18	1.19	2.87
385	6.50		0.78	3.06				
77.65	BLACK DOUGLAS; May 8, 1951; 1208 GCT; 34°34'N, 121°55'W; sounding, 2100 fm; wind, 310°, force 5; weather, overcast; sea, rough; wire angle, 07°.							
0	13.70		5.88	0.48	0	13.70	5.88	0.48
10	13.68		5.79	0.51	10	13.68	5.79	0.51
25	13.70		5.88	0.54	20	13.69	5.87	0.52
50	10.90		5.60	1.01	30	13.67	5.87	0.56
73	9.51		4.86	1.47	50	10.90	5.60	1.01
97	9.18		4.39	1.66	75	9.47	4.81	1.49
150	8.50		2.74	2.19	100	9.14	4.34	1.68
196	8.18		2.26	-	150	8.50	2.74	2.19
291	7.19		1.43	2.83	200	8.15	2.23	2.46
390	6.18		0.92	3.12	250	7.67	1.76	2.68
484	5.42		0.71	3.25	300	7.11	1.38	2.87
584	5.15		0.40	3.39	400	6.08	0.88	3.13
777	4.43		0.44	3.40	500	5.35	0.65	3.30
971	3.98		0.60	3.38	600	5.07	0.40	3.39
1173	3.43		0.83	-	700	4.68	0.41	3.40
					800	4.35	0.46	3.40
					1000	3.92	0.63	(3.37)

a) Alternate value, 13.34°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; May 9, 1951; 0205 GCT; 34°19'N, 120°48'W; sounding, 410 fm; wind, 320°, force 7; weather, overcast; sea, high; wire angle, 10°.								80.55
0	12.05		5.94	1.04	0	12.05	5.94	
10	12.06	33.31	5.96	-	10	12.06	5.96	
25	12.05		5.92	1.02	20	12.05	5.95	
49	12.03		5.81	1.09	30	12.05	5.89	
73	10.06		4.75	-	50	12.03	5.80	
96	9.64		3.87	-	75	10.02	4.67	
					100	(9.57)	(3.73)	
BLACK DOUGLAS; May 14, 1951; 1735 GCT; 33°44'N, 120°24.5'W; sounding, 600 fm; wind, 300°, force 6; weather, partly cloudy; sea, very rough; wire angle, 22°.								83.55
0	11.98	33.50	5.87	-	0	11.98	5.87	
9	11.98	33.49	5.91	1.03	10	11.96	5.90	1.03
23	11.25	33.58	5.60	1.29	20	11.48	5.64	1.20
46	10.82	33.60	5.33	1.47	30	11.18	5.50	1.35
68	9.24	33.75	3.24	1.96	50	10.60	5.17	1.51
91	8.82	33.84	3.12	-	75	9.08	3.17	2.03
139	8.14	33.96	2.86	2.22	100	8.69	3.11	2.15
184	7.63	34.04	2.35	2.40	150	8.00	2.75	2.24
269	7.62	34.21	1.23	-	200	7.63	2.16	(2.49)
359	6.64	34.14	1.28	2.86	250	7.62	1.48	(2.68)
444	6.56	34.32	0.68	3.14	300	7.45	1.21	(2.79)
536	5.93	34.34	0.49	-	400	6.60	1.04	2.94
					500	6.25	0.55	
BLACK DOUGLAS; May 14, 1951; 2259 GCT; 33°34'N, 120°45'W; sounding, 900 fm; wind, 300°, force 7; weather, partly cloudy; sea, high; wire angle, 05°.								83.60
0	11.50		5.85	1.12	0	11.50	5.85	1.12
10	11.54	33.24	5.79	1.05	10	11.54	5.79	1.05
25	11.17		5.53	1.14	20	11.28	5.57	1.10
50	11.16		5.60	1.26	30	11.17	5.54	1.18
74	10.92		5.34	1.33	50	11.16	5.60	1.26
99	9.31		3.03	-	75	10.91	5.31	(1.36)
152	8.56		2.28	-	100	9.30	3.00	(2.03)
199	8.26		1.97	2.38	150	8.59	2.30	(2.30)
293	7.56		1.11	2.80	200	8.25	1.96	2.38
393	6.66		0.68	3.07	250	7.88	1.44	2.46
488	6.06		0.56	-	300	7.50	1.08	2.85
587	5.62		0.36	3.21	400	6.61	0.67	3.07
781	4.78		0.36	3.33	500	6.00	0.56	3.11
972	4.13		0.49	-	600	5.57	0.36	3.22
1172	3.58		0.75	-	700	5.13	0.36	3.29
					800	4.70	0.37	
					1000	4.06	0.52	

SIO

CCOFI
5105

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
83.70	BLACK DOUGLAS; May 15, 1951; 1425 GCT; 33°14.5'N, 121°26'W; sounding, 2120 fm; wind, 310°, force 5; weather, overcast; sea, high; wire angle, 18°.							
0	13.1		5.91	0.59	0	13.1	5.91	0.59
10	13.08	33.15	5.88	-	10	13.08	5.88	0.59
25	13.08		5.91	0.67	20	13.08	5.89	0.63
53	12.42		5.96	0.88	30	13.05	5.92	0.73
76	12.02		5.91	0.95	50	12.57	5.95	0.87
103	10.96		4.94	-	75	12.06	5.91	0.95
149	8.96		2.87	2.08	100	11.19	5.16	1.30
198	8.28		2.44	-	150	8.94	2.87	(2.09)
293	6.86		1.89	2.74	200	8.23	2.42	(2.35)
392	5.89		1.28	3.03	250	7.52	2.11	(2.55)
488	5.35		0.72	3.24	300	6.78	1.85	2.76
584	4.94		0.46	3.38	400	5.84	1.24	3.04
775	4.34		0.53	-	500	5.30	0.67	3.26
978	3.80		0.76	3.34	600	4.88	0.46	
1178	3.40		0.92	-	700	4.55	0.48	
					800	4.28	0.56	
					1000	3.74	0.78	
83.70	BLACK DOUGLAS; May 15, 1951; 1646 GCT;[a] 33°14.5'N, 121°26'W; sounding, 2120 fm; wind, 310°, force 3; weather, overcast; sea, high; wire angle, 03°.							
0	13.04							
10	13.10							
20	13.04							
30	13.04							
40	12.86							
50	12.45							
60	12.32							
70	12.17							
80	11.79							
90	11.04							
100	9.86							
110	9.26							
120	9.21							
133	9.03							
87.35	BLACK DOUGLAS; May 12, 1951; 1548 GCT; 33°50'N, 118°37.5'W; sounding, 300 fm; wind, 240°, force 2; weather, clear; sea, very rough; wire angle, 05°.							
0	13.52	33.51	6.34	-	0	13.52	6.34	
10	13.26	33.49	6.35	0.65	10	13.26	6.35	0.65
25	12.02	33.53	5.74	-	20	12.41	6.05	
50	10.32	33.55	4.00	1.66	30	11.65	5.53	
74	9.46	33.77	3.07	2.11	50	10.32	4.00	1.66
98	9.30	33.86	2.83	2.17	75	9.46	3.06	2.11
150	8.49	34.04	2.57	2.26	100	9.28	2.81	2.17
197	8.18	34.10	1.96	2.50	150	8.49	2.57	2.26
246	7.81	34.13	1.65	-	200	8.16	1.93	(2.52)
294	7.60	34.22	1.24	-	250	7.80	1.62	(2.68)
347	7.50	34.27	0.85	2.94	300	7.59	1.18	(2.77)
395	7.07	34.29	0.72	3.06	400	7.02	0.70	3.06
449	6.72	34.29	0.59	3.07	500	(6.41)		
494	6.44	-	0.82u	-				

a) Bathythermograph calibration cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

87.40 BLACK DOUGLAS; May 12, 1951; 1119 GCT; 33°40'N, 118°58.5'W; sounding, 470 fm; wind, 300°, force 5; weather, clear; sea, very rough; wire angle, 20°.

0	13.0		5.95	0.84	0	13.0	5.95	0.84
9	12.94	33.55	6.01	0.85	10	12.93	6.00	(0.85)
23	11.44		5.13	-	20	11.82	5.27	(1.23)
45	9.78		4.71	1.78	30	10.78	4.98	(1.49)
67	9.46		3.28	-	50	9.68	4.53	1.84
88	9.05		2.76	2.13	75	9.33	2.99	2.05
134	8.90		2.65	2.20	100	8.98	2.70	2.16
175	8.42		2.04	2.44	150	8.77	2.55	2.25
216	8.07		1.68	2.49	200	8.20	1.80	2.48
258	7.76		1.36	-	250	7.83	1.41	
349	7.00		0.82	-	300	7.42	1.17	
438	6.61		0.60	3.01	400	6.78	0.63	
534	6.08		0.52	3.12	500	6.27	0.55	

87.50 BLACK DOUGLAS; May 12, 1951; 0052 GCT; 33°20'N, 119°39.5'W; sounding, 40 fm; wind, 320°, force 8; weather, clear; sea, high; wire angle, 10°.

0	12.31		5.99		0	12.31	5.99	
10	12.32	33.51	5.93		10	12.32	5.93	
25	12.21		5.81		20	12.26	5.86	
50	10.86		4.76		30	12.14	5.73	
					50	10.86	4.76	

87.60 BLACK DOUGLAS; May 11, 1951; 1200 GCT; 33°00'N, 120°21.5'W; sounding, 360 fm; wind, 320°, force 9; weather, partly cloudy; sea, high; wire angle, 15°.

0	13.34		6.15	-	0	13.34	6.15	
10	13.36	33.22	6.26	0.62	10	13.36	6.26	0.62
24	13.36		6.21	0.57	20	13.36	6.24	0.58
49	12.88		6.01	-	30	13.33	6.18	(0.58)
73	10.13		4.78	-	50	12.87	6.00	(0.82)
97	8.89		3.81	1.86	75	9.94	4.58	(1.40)
150	8.32		2.95	2.15	100	8.86	3.73	1.90
196	7.62		2.53	2.26	150	8.32	2.95	2.15
243	7.28		2.24	2.48	200	7.58	2.51	2.27
290	6.95		1.91	2.60	250	7.22	2.19	2.51
341	6.68		1.28	-	300	6.88	1.83	2.61
390	6.54		0.84	2.97	400	6.48	0.82	2.99
445	5.90		0.75	3.06	500	(5.85)		
489	5.86		0.72	3.11				

87.70 BLACK DOUGLAS; May 11, 1951; 0424 GCT; 32°39.5'N, 121°02'W; sounding, 1990 fm; wind, 320°, force 4; weather, clear; sea, very rough; wire angle, 05°.

0	13.93		5.94	-	0	13.93	5.94	
10	13.96	32.99	5.96	0.53	10	13.96	5.96	0.53
25	13.96		5.97	0.52	20	13.96	5.97	0.52
49	13.82		6.00	-	30	13.94	5.99	
74	10.89		5.63	-	50	13.80	5.99	
98	9.55		5.12	1.30	75	10.88	5.60	
152	8.64		3.75	-	100	9.49	5.08	
200	8.01		3.12	-	150	8.68	3.78	
293	7.22		1.69	2.63	200	8.01	3.12	
391	6.06		1.18	2.90	250	7.54	2.50	
485	5.69		0.66	3.14	300	7.16	1.61	2.65
585	5.44		0.42	3.28	400	6.00	1.15	2.93
777	4.67		0.47	3.37	500	5.65	0.58	3.17
969	4.00		0.61	3.37	600	5.39	0.44	3.29
1168	3.50		1.03	3.36	700	5.01	0.46	3.35
					800	4.58	0.49	3.37
					1000	3.90	0.66	3.37

S10

CCOFI 5105

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
87.80	BLACK DOUGLAS; May 10, 1951; 1834 GCT; 32°19.5'N, 121°43'W; sounding, 2200 fm; wind, 320°, force 6; weather, cloudy; sea, high; wire angle, 18°.							
0	14.39		5.88	0.56	0	14.39	5.88	0.56
10	14.37	33.04	5.88	0.54	10	14.37	5.88	0.54
23	14.38		5.84	0.57	20	14.38	5.86	0.56
46	14.43		5.84	0.60	30	14.40	5.84	0.58
68	12.40		5.86	0.81	50	14.43	5.85	0.61
91	10.72		5.21	1.31	75	11.75	5.80	0.89
140	8.88		3.58	2.04	100	10.37	4.87	1.55
184	8.30		3.03	2.17	150	8.71	3.40	2.08
272	7.13		2.66	2.33	200	8.09	2.96	2.19
365	6.48		1.19	2.90	250	7.38	2.79	2.27
454	5.74		0.85	3.16	300	6.90	2.47	2.43
547	5.31		0.48	-	400	6.21	0.96	3.02
729	4.65		0.44	-	500	5.52	0.64	
912	4.06		0.66	3.32	600	5.10	0.45	
1109	3.55		1.03	3.23	700	4.75	0.44	
					800	4.44	0.51	
					1000	3.81	0.80	
87.90	BLACK DOUGLAS; May 10, 1951; 0904 GCT; 31°59'N, 122°24'W; sounding, 2340 fm; wind, 310°, force 6; weather, partly cloudy; sea, high; wire angle, 16°.							
0	14.99		5.75	0.58	0	14.99	5.75	0.58
10	14.98		5.80	0.59	10	14.98	5.80	0.59
24	14.95		5.73	0.59	20	14.96	5.76	0.59
48	11.88		5.79	0.94	30	14.92	5.74	0.61
71	10.50		4.80	-	50	11.66	5.77	1.00
95	9.76		4.33	1.68	75	10.33	4.74	1.50
144	8.63		3.22	2.11	100	9.65	4.22	1.74
189	8.09		3.12	2.14	150	8.53	3.20	2.12
279	6.79		1.99	2.61	200	7.97	3.00	2.16
374	6.14		1.23	2.93	250	7.24	2.31	2.43
466	5.58		0.71	3.12	300	6.58	1.77	2.70
562	5.32		0.46	3.24	400	5.99	1.07	2.99
751	4.74		0.54	3.30	500	5.47	0.59	3.17
941	4.04		0.65	3.31	600	5.21	0.45	3.26
1142	3.52		0.82	3.19	700	4.90	0.48	3.30
					800	4.57	0.56	3.31
					1000	3.86	0.70	3.29
90.30	CREST; May 15, 1951; 2055 GCT; 33°24.5'N, 117°55'W; sounding, 300 fm; wind, 200°, force 3; weather, partly cloudy; sea, slight; wire angle, 18°.							
0	15.20	33.45	5.90	0.46	0	15.20	5.90	0.46
9	13.37	33.42	6.27	0.52	10	13.37	6.27	0.52
23	11.40	33.40	4.85	1.14	20	11.63	5.45	0.96
47	9.93	33.57	3.50	1.68	30	10.85	4.34	1.33
70	9.49	33.78	3.09	1.86	50	9.84	3.41	1.70
93	9.29	33.90	2.65	2.02	75	9.43	2.99	1.90
142	8.93	34.13	1.90	2.30	100	9.24	2.51	2.07
186	8.75	34.18	1.32	2.51	150	8.89	1.80	2.34
231	8.51	34.23	1.09	2.64	200	8.68	1.22	2.56
277	8.3 a)	34.27	0.93	2.71	250	8.40	1.02	2.67
329	7.82	34.22	0.79	-	300	8.07	0.86	2.74
377	7.26	34.23	0.75	2.86	400	7.09	0.70	2.91
427	6.93	34.26	0.60	2.96				

a) Temperature inferred from pressure thermometer and wire depth.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 15, 1951; 1425 GCT; 33°11'N, 118°23.5'W; sounding, 645 fm; wind, 160°, force 3; weather, cloudy; sea, moderate; wire angle, 16°. 90.37

0	14.90	-	6.17	0.41	0	14.90	6.17	0.41
10	14.90	33.40	6.09	0.38	10	14.90	6.09	0.38
24	11.34	-	4.61	1.26	20	12.65	5.87	0.80
48	9.76	-	3.89	1.65	30	10.55	4.33	1.39
72	9.48	-	2.91	2.02	50	9.72	3.80	1.68
95	9.57	-	2.20	2.16	75	9.47	2.73	2.05
147	9.40	34.09	1.81	2.29	100	9.57	2.15	2.19
194	8.95	34.16	1.49	2.46	150	9.37	1.80	2.30
289	7.83	34.23	1.03	2.80	200	8.86	1.45	2.49
388	6.5 a)	34.20	0.66	3.00	250	8.25	1.20	2.69
484	6.26	34.25	0.48	3.13	300	7.70	0.98	2.83
583	5.61	34.29	0.32	3.22	400	6.49	0.62	3.02
678	5.31	34.34	0.33	-	500	6.14	0.45	3.15
776	4.80	-	0.32	3.23	600	5.54	0.32	3.22
959	4.32	34.36	0.44	-	700	5.20	0.33	3.21
					800	4.70	0.33	
					1000	(4.24)	(0.49)	

CREST; May 15, 1951; 0639 GCT; 32°54.5'N, 118°56'W; sounding, 950 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 05°. 90.45

0	13.60		5.69	0.68	0	13.60	5.69	0.68
10	13.60	33.42	5.64	0.68	10	13.60	5.64	0.68
25	13.48		5.67	0.69	20	13.51	5.66	0.68
50	9.76		3.64	1.70	30	13.36	5.67	0.71
74	9.22		3.04	1.93	50	9.76	3.64	1.70
98	9.00		2.76	2.10	75	9.20	3.02	1.94
151	8.30		2.56	2.18	100	8.98	2.75	2.10
198	7.93		1.67	2.52	150	8.31	2.56	2.18
295	7.32		0.99	2.84	200	7.91	1.66	2.53
394	6.6 a)		0.60	3.03	250	7.59	1.26	2.72
489	6.11		0.42	3.26	300	7.29	0.96	2.85
588	5.60		0.31	3.31	400	6.61	0.58	3.05
783	4.73		0.39	3.38	500	6.04	0.40	3.27
975	4.14		0.58	3.40	600	5.54	0.31	3.31
1174	3.86		0.58	3.42	700	5.07	0.33	3.34
					800	4.65	0.42	3.38
					1000	4.08	0.58	3.40

CREST; May 15, 1951; 0835 GCT;[b] 32°54.5'N, 118°56'W; sounding, 950 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 00°. 90.45

0	13.60
10	13.62
20	13.61
30	13.39
40	10.42
49	9.66
59	9.49
68	9.15
78	9.06
97	8.88
107	8.83
117	8.71
127	8.57
137	8.41

a) Temperature inferred from pressure thermometer and wire depth.
b) Bathythermograph calibration cast.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.53	CREST; May 15, 1951; 0204 GCT; 32°38.5'N, 119°29'W; sounding, 620 fm; wind, 300°, force 6; weather, cloudy; sea, very rough; wire angle, 38°.							
0	12.81		6.05	0.66	0	12.81	6.05	0.66
8	12.78	33.21	6.08	0.66	10	12.75	6.12	0.66
20	12.14		6.14	0.85	20	12.14	6.14	0.85
39	12.11		6.01	0.86	30	12.12	6.09	0.86
59	11.90		6.00	0.89	50	11.99	6.00	0.87
79	10.27		4.94	1.29	75	11.87	5.65	1.19
123	9.04		3.71	1.82	100	9.56	4.28	1.57
164	8.54		2.45	2.16	150	8.68	2.76	2.07
243	7.60		1.74	2.46	200	8.07	2.06	2.31
326	7.2 a)		1.11	-	250	7.54	1.68	(2.49)
406	6.70		0.69	2.94	300	7.28	1.28	(2.65)
491	6.30		0.49	3.04	400	6.74	0.72	(2.92)
576	5.78		0.36	3.14	500	6.25	0.47	3.05
669	5.35		0.33	3.16	600	5.64	0.34	3.15
859	4.54		0.42	3.24	700	5.22	0.34	3.17
					800	4.79	0.37	3.21
90.60	CREST; May 14, 1951; 2105 GCT; 32°24.5'N, 119°57.5'W; sounding, 850 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 41°.							
0	13.92		5.86	0.53	0	13.92	5.86	0.53
7	13.96	33.10	5.87	0.52	10	13.94	5.86	0.52
22	13.89b)		5.81	0.54	20	13.89	5.82	0.53
45	13.60		5.82	0.56	30	13.89	5.83	0.55
66	12.40		5.56	0.66	50	13.17	5.79	0.58
88	11.32		5.52	1.14	75	11.86	5.54	0.76
128	9.69		4.43	1.74	100	10.88	5.46	1.39
169	8.74		3.64	2.08	150	9.10	3.95	1.93
249	7.74		2.50	2.76	200	8.21	3.16	2.38
325	6.8 a)		1.75	3.02	250	7.72	2.49	2.76
405	6.76		0.76	3.05	300	7.08	1.98	2.96
482	6.12		0.58	3.28u	400	6.78	0.79	3.05
644	5.28		0.39	3.21	500	5.99	0.55	
819	4.52		0.46	3.24	600	5.48	0.43	
1014	3.97		0.86	3.18	700	5.01	0.40	3.23
					800	4.60	0.45	3.24
					1000	4.00	0.83	3.19
90.70	CREST; May 14, 1951; 1410 GCT; 32°04.5'N, 120°39'W; sounding, 2080 fm; wind, 300°, force 6; weather, partly cloudy; sea, very rough; wire angle, 35°.							
0	15.16		5.53	0.56	0	15.16	5.53	0.56
8	15.20	33.17	5.54	0.55	10	15.20	5.54	0.55
20	15.18		5.46	0.57	20	15.18	5.46	0.57
44	15.19		5.60	0.60	30	15.19	5.51	0.59
62	15.10		5.56	0.84	50	15.17	5.59	0.62
84	13.55		5.64	1.04	75	14.50	5.60	0.98
125	10.83		5.21	1.56	100	11.96	5.56	1.20
166	9.86		3.40	1.94	150	10.19	4.03	1.81
249	8.05		2.87	2.28	200	9.00	3.17	2.11
335	6.9 a)		1.97	-	250	8.02	2.86	(2.29)
400p	6.30c)		1.07	-	300	7.29	2.29	(2.51)
503	5.72		0.60	3.30	400	6.30	1.07	(3.04)
671	5.16		0.61	3.34	500	5.73	0.61	(3.29)
852	4.43		0.56	3.33	600	5.36	0.60	3.33
1031	3.87		0.64	3.14	700	5.04	0.60	3.34
					800	4.64	0.58	3.34
					1000	3.95	0.61	3.18

a) Temperature inferred from pressure thermometer and wire depth.
b) Alternate value, 13.78°C, not used in interpolation.
c) Mean value of 6.27 and 6.33°C.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 14, 1951; 0804 GCT; 31°45'N, 121°19'W; sounding, 2100 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 34°. 90.80

0	15.10		5.73	0.54	0	15.10	5.73	0.54
8	15.13	33.06	5.47	0.56	10	15.13	5.31	0.56
20	15.14		5.20	0.59	20	15.14	5.20	0.59
46	14.40		5.47	0.60	30	15.10	5.30	0.60
66	13.96		5.52	0.61	50	14.38	5.50	0.61
91	10.90		5.17	0.60	75	12.30	5.46	0.61
136	9.62		3.77	1.77	100	10.60	4.91	0.61
183	8.54		3.40	2.06	150	9.27	3.60	1.89
275	7.25		2.40	2.46	200	8.25	3.25	2.14
371	6.2 a)		1.39	2.90	250	7.54	2.70	2.36
463	5.64		0.80	3.18	300	6.96	2.14	2.48
557	5.56		0.36	3.27	400	5.99	1.16	3.01
742	4.75		0.42	3.39	500	5.58	0.59	3.22
932	4.18		0.57	3.40	600	5.44	0.36	3.30
1126	3.52		0.79	3.19	700	4.93	0.40	3.37
					800	4.55	0.45	3.39
					1000	3.96	0.65	3.36

CREST; May 14, 1951; 0208 GCT; 31°25.5'N, 121°59'W; sounding, 2200 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 35°. 90.90

0	15.06		6.15	0.62	0	15.06	6.15	0.62
8	15.09	33.13	5.62	-	10	15.09	5.63	0.62
20	15.06		5.80	0.62	20	15.06	5.80	0.62
45	13.78		5.86	0.62	30	14.95	5.84	0.62
66	11.64		5.86	1.05	50	13.75	5.86	0.62
88	10.40		4.85	1.22	75	11.07	5.72	1.14
128	9.23		3.55	1.58	100	10.00	4.38	1.32
170	8.48		2.98	2.14	150	8.79	3.23	1.93
253	7.32		2.07	2.48	200	8.02	2.64	2.28
341	6.5 a)		1.28	2.82	250	7.36	2.10	2.46
428	5.78		0.77	3.14	300	6.82	1.63	2.66
515	5.34		0.49	3.28	400	5.98	0.92	3.04
688	4.69		0.39	3.27	500	5.42	0.52	3.26
866	4.19		0.60	-	600	5.00	0.43	3.28
1051	3.64		0.64	3.25	700	4.65	0.40	(3.27)
					800	4.38	0.51	(3.27)
					1000	3.77	0.64	(3.27)

CREST; May 13, 1951; 2030 GCT; 31°06'N, 122°40'W; sounding, 2260 fm; wind, 280°, force 5; weather, overcast; sea, rough; wire angle, 38°. 90.100

0	15.26		5.61		0	15.26	5.61	
8	15.28	33.13	5.61		10	15.27	5.60	
20	15.21		5.47		20	15.21	5.47	
43	13.74		5.75		30	15.17	5.56	
61	13.42		5.65		50	13.58	5.69	
81	11.41		5.85		75	11.76	5.83	
119	9.69		5.21		100	10.50	5.66	
156	8.72		4.12		150	8.84	4.23	
230	7.94		3.64		200	8.20	3.78	
308	7.1 a)		2.34		250	7.73	3.44	
385	6.59b)		1.57		300	7.15	2.52	
462	5.62		1.03		400	6.43	1.46	
613	5.05		0.57		500	5.36	0.89	
777	4.43		0.42		600	5.07	0.60	
956	3.84		0.70		700	4.75	0.46	
					800	4.33	0.43	
					1000	(3.70)	(0.70)	

a) Temperature inferred from pressure thermometer and wire depth.
b) Mean value of 6.56 and 6.62°C.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.110	CREST; May 13, 1951; 1323 GCT; 30°46'N, 123°20.5'W; sounding, 2150 fm; wind, 320°, force 6; weather, cloudy; sea, rough; wire angle, 30°.							
0	16.31		5.46	0.60	0	16.31	5.46	0.60
9	16.34	33.40	5.42	0.58	10	16.34	5.44	0.58
22	16.34		5.46	0.57	20	16.34	5.45	0.57
48	16.36		5.40	0.57	30	16.35	5.45	0.56
69	15.85		5.48	-	50	16.35	5.42	0.57
95	14.72		5.33	0.64	75	15.63	5.46	0.58
140	11.41		5.19	1.20	100	14.45	5.31	0.68
184	9.46		4.22	1.65	150	10.79	5.11	1.32
270	7.77		2.98	2.14	200	9.11	3.90	1.78
363	6.8 a)		1.60	2.78	250	8.13	3.23	2.04
453	6.12		0.97	3.05	300	7.39	2.53	2.32
543	5.60		0.60	3.20	400	6.51	1.32	2.91
726	4.60		0.42	3.36	500	5.84	0.75	3.15
916	3.96		0.68	3.28	600	5.29	0.51	3.26
1110	3.48		1.01	3.28	700	4.75	0.43	3.35
					800	4.32	0.49	3.33
					1000	3.71	0.85	3.26
90.110	CREST; May 13, 1951; 1457 GCT;[b] 30°46'N, 123°20.5'W; sounding, 2150 fm; wind, 320°, force 6; weather, cloudy; sea, rough; wire angle, 25°.							
623	5.14							
646	5.06							
669	4.76							
691	4.73							
716	4.60							
739	4.52							
761	4.47							
785	4.39							
809	4.26							
857	4.14							
881	4.11							
906	4.03							
931	3.94							
956	3.84							

a) Temperature inferred from pressure thermometer and wire depth.
b) Test cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 13, 1951; 0514, 0701 GCT; 30°26.5'N, 124°01'W; sounding, 2400 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 28°, 24°. 90.120

0	16.66	33.40	5.41	0.52	0	16.66	5.41	0.52
9	16.70	33.42	5.46	0.50	10	16.70	5.46	0.50
22	16.68	33.42	5.36	0.48	20	16.69	5.37	0.48
47	16.54	33.46	5.50	0.48	30	16.65	5.39	0.48
68	15.22	33.35	5.56	0.47	50	16.52	5.52	0.48
92	14.38	33.22	5.58	0.54	75	15.08	5.58	0.48
136	11.28	33.23	5.27	1.01	100	13.25	5.57	0.59
180	9.92	33.77	4.00	1.54	150	10.79	4.68	1.24
268	8.02	34.00	3.43	1.92	200	9.45	3.77	1.66
362	6.9 a)	34.05	1.73	-	250	8.36	3.50	1.86
450	6.12	34.14	0.92	3.02	300	7.57	3.17	2.06
540	5.66	34.16	0.56	3.16	400	6.55	1.26	2.76
729	4.69	34.27	0.49	3.30	500	5.82	0.70	3.14
901	4.10	34.45	0.53	3.30	600	5.28	0.40	3.20
1097	3.58	34.52	0.85	3.28	700	4.81	0.48	3.29
					800	4.43	0.50	3.30
615b)	5.20	34.27	0.38	3.12	1000	3.90	0.64	3.29
1027	3.81	34.47	0.79	3.22	1200	3.36	0.89	3.17
1232	3.31	34.54	0.93	-	1500	2.80	1.27	3.17
1551	2.69	34.56	1.35	-	2000	2.10	1.83	3.04
1827	2.3 a)	34.58	1.66	3.04	2500	1.80	2.13	2.89
2124	2.02	34.60	1.95	3.04	3000	1.60	2.44	2.86
2405	1.86	34.67	2.25	2.92				
2688	1.72	34.63	2.43	2.86				
3023	1.61	34.67	2.44	2.86				
3416	1.57	34.67	2.69	2.76				

CREST; May 6, 1951; 1740 GCT; 32°49'N, 117°31.5'W; sounding, 450 fm; wind, 270°, force 2; weather, partly cloudy; sea, moderate; wire angle, 11°. 93.30

0	14.88		3.94u	0.54	0	14.88		0.54
10	14.46	33.37	4.69	0.52	10	14.46	4.69	0.52
24	13.47		4.67	0.60	20	13.77	4.69	0.55
48	10.40		2.81	1.40	30	13.05	4.62	0.87
72	9.32		2.54	1.66	50	10.17	2.75	1.43
95	9.36		2.47	1.96	75	9.33	2.53	1.68
145	8.77		2.13	-	100	9.34	2.46	2.00
190	8.22		1.67	2.40	150	8.72	2.10	2.26
281	7.70		1.06	2.78	200	8.12	1.58	2.43
376	7.40		0.55	-	250	7.83	1.25	2.66
469	6.42		0.52	3.11	300	7.62	0.96	2.82
567	5.98		0.29	-	400	7.22	0.54	3.00
					500	6.25	0.47	

a) Temperature inferred from pressure thermometer and wire depth.
b) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
93.40	CREST; May 6, 1951; 2340 GCT; 32°30'N, 118°12.5'W; sounding, 900 fm; wind, 290°, force 5; weather, partly cloudy; sea, rough; wire angle, 25°.							
0	14.48		5.81	0.60	0	14.48	5.81	0.60
9	14.49	33.46	5.80	0.61	10	14.49	5.80	0.61
22	13.68		5.94	0.64	20	14.00	5.94	0.64
45	10.16		3.71	1.62	30	13.25	5.84	0.70
67	9.41		3.20	1.84	50	9.89	3.54	1.69
88	9.17		2.93	-	75	9.29	3.09	1.89
134	8.73		2.35	2.12	100	9.04	2.77	2.02
176	8.29		2.03	2.33	150	8.54	2.22	2.19
260	7.64		1.31	2.70	200	8.08	1.85	2.44
347	7.21		0.65	2.92	250	7.72	1.40	2.66
432	6.37		0.49	3.09	300	7.43	1.00	2.81
521	5.84		0.34	3.20	400	6.72	0.53	3.04
698	5.08		0.36	-	500	5.95	0.37	3.17
875	4.37		0.44	3.27	600	5.48	0.35	(3.25)
1070	3.93a)		0.56	3.28	700	5.07	0.37	(3.27)
					800	4.68	0.38	(3.27)
					1000	4.07	0.54	3.27
93.50	CREST; May 7, 1951; 0608 GCT; 32°10'N, 118°53.5'W; sounding, 800 fm; wind, 300°, force 6; weather, clear; sea, rough; wire angle, 35°.							
0	14.18		5.90	0.57	0	14.18	5.90	0.57
8	14.20	33.30	5.99	0.58	10	14.20	5.99	0.58
20	13.06		5.78	0.66	20	13.06	5.78	0.66
44	11.70		4.91	1.14	30	12.38	5.36	0.84
63	10.41		4.05	1.57	50	11.12	4.60	1.24
85	10.03		-	1.70	75	10.19	3.74	1.65
126	9.19		2.98	1.99	100	9.75	3.29	1.80
167	8.62		2.73	2.13	150	8.84	2.80	2.08
250	7.97		1.48	2.56	200	8.34	2.37	2.25
338	7.33		0.90	2.89	250	7.97	1.48	2.56
423	6.62b)		0.80	2.96	300	7.59	1.10	2.78
510	6.20		0.44	3.14	400	6.85	0.82	2.96
684	5.22		0.33	3.30	500	6.24	0.46	3.12
868	4.36		0.49	3.32	600	5.68	0.36	3.24
1059	3.85		0.68	3.23	700	5.12	0.34	3.31
					800	4.64	0.41	3.32
					1000	3.98	0.64	3.27
93.60	CREST; May 7, 1951; 1258 GCT; 31°50'N, 119°34'W; sounding, 1950 fm; wind, 290°, force 5; weather, partly cloudy; sea, very rough; wire angle, 28°.							
0	15.47		5.92	0.60	0	15.47	5.92	0.60
9	15.50	33.20	5.58	0.59	10	15.50	5.58	0.59
26	15.50		5.60	0.60	20	15.50	5.58	0.59
53	15.12		5.64	0.57	30	15.49	5.60	0.60
79	14.40		5.82	0.62	50	15.18	5.62	0.57
106	12.16		5.42	0.94	75	14.51	5.82	0.60
157	9.84		4.01	1.65	100	12.90	5.52	0.84
210	9.18		2.70	2.10	150	10.00	4.23	1.56
318	7.58		1.86	-	200	9.29	2.88	2.03
421	6.36		1.05	2.96	250	8.63	2.31	(2.32)
529	5.50		0.52	3.21	300	7.85	1.97	(2.54)
632	4.98		0.39	3.28	400	6.58	1.22	(2.89)
842	4.27		0.41	3.33	500	5.71	0.62	3.15
1049	3.64		0.69	3.30	600	5.11	0.40	3.27
1257	3.24		0.96	3.34	700	4.70	0.40	3.30
					800	4.38	0.40	3.32
					1000	3.78	0.61	3.31

a) Mean value of 3.90 and 3.96°C.
b) Mean value of 6.59 and 6.65°C.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

93.70 CREST; May 7, 1951; 1729 GCT; 31°29'N, 120°14'W; sounding, 2200 fm; wind, 320°, force 5; weather, partly cloudy; sea, high; wire angle, 22°.

0	15.26		5.15	0.66	0	15.26	5.15	0.66
8	15.28	33.12	5.24	0.59	10	15.27	5.26	0.59
22	15.23		5.56	0.59	20	15.24	5.55	0.59
50	14.56		5.46	0.59	30	15.19	5.55	0.59
74	12.78		5.11	0.78	50	14.56	5.46	0.59
100	10.96		4.94	1.21	75	12.60	5.10	0.81
152	9.15		3.43	1.88	100	10.96	4.94	1.21
201	8.34		3.01	2.11	150	9.19	3.44	1.86
300	7.19		2.19	2.86	200	8.36	3.02	2.10
406	6.08		1.24	-	250	7.74	2.63	2.52
507	5.56		0.62	-	300	7.19	2.19	2.86
608	5.26		0.37	3.28	400	6.14	1.28	(3.03)
806	4.60		0.37	3.38	500	5.58	0.65	(3.17)
1006	4.03		0.55	3.38	600	5.27	0.37	(3.27)
1203	3.38		0.77	-	700	4.98	0.37	3.34
					800	4.62	0.37	3.38
					1000	4.04	0.55	3.38

93.80 CREST; May 7, 1951; 2326, 2358 GCT; 31°10'N, 120°54.5'W; sounding, 2150 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 35°, 50°.

0	15.62		5.57	0.53	0	15.62	5.57	0.53
8	15.62	33.10	5.69	0.52	10	15.61	5.68	0.51
20	15.57		5.44	0.50	20	15.57	5.44	0.50
42	15.06		5.53	0.52	30	15.30	5.45	0.50
60	15.00		5.38	0.54	50	15.01	5.45	0.53
81	13.60		5.68	0.58	75	14.55	5.65	0.56
119	10.75		5.13	1.11	100	11.76	5.44	0.67
159	9.49		4.13	1.62	150	9.73	4.36	1.54
238	7.93		3.08	2.11	200	8.63	3.52	1.90
326	6.86		1.84	2.56	250	7.75	2.93	2.17
					300	7.15	2.22	2.44
350	6.46		1.49	-	400	6.07	1.10	2.92
425	5.96		0.97	3.00	500	5.67	0.59	3.09
581	5.43		0.32	3.16	600	5.35	0.33	3.17
748	4.56		0.33	3.33	700	4.83	0.33	3.29
929	4.01		0.49	3.24	800	4.35	0.35	3.31
					1000	(3.84)		

93.90 CREST; May 8, 1951; 0650 GCT; 30°50'N, 121°35'W; sounding, 2300 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 40°.

0	15.47		5.35	0.53	0	15.47	5.35	0.53
8	15.49	33.28	5.50	0.52	10	15.49	5.49	0.52
23	15.35		5.46	0.54	20	15.37	5.49	0.54
45	15.12		5.42	0.52	30	15.25	5.46	0.54
69	13.88		5.73	0.54	50	15.04	5.42	0.52
92	12.78		5.42	0.65	75	13.86	5.72	0.53
138	10.16		4.69	1.30	100	12.06	5.25	0.79
183	8.86		3.58	1.80	150	9.76	4.48	1.44
274	7.66		2.75	2.17	200	8.61	3.35	1.88
361	6.61		-	2.67	250	7.96	2.93	2.07
452	5.78		0.98	-	300	7.36	2.45	2.30
539	5.25		0.56	3.11	400	6.22	1.32	2.79
717	4.56		0.37	3.25	500	5.47	0.74	3.03
903	4.02		0.52	-	600	4.98	0.45	3.19
1101	3.52		0.83	3.20	700	4.62	0.37	3.25
					800	4.30	0.41	3.25
					1000	3.77	0.67	3.24

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
9732	CREST; May 9, 1951; 2355 GCT; 32°10.5'N, 117°16.5'W; sounding, 770 fm; wind, 240°, force 2; weather, partly cloudy; sea, moderate; wire angle, 06°.							
0	15.87		5.71	0.54	0	15.87	5.71	0.54
10	14.96	33.39	5.97	0.69	10	14.96	5.97	0.69
25	12.99		5.74	0.69	20	13.62	5.92	0.69
50	10.00		3.43	1.10	30	12.29	5.40	0.70
74	9.48		3.35	1.62	50	10.00	3.43	1.10
98	9.18		3.29	1.82	75	9.46	3.34	1.63
151	9.02		3.16	-	100	9.17	3.28	1.83
198	8.63		1.71	2.47	150	9.02	3.16	2.17
292	7.41		1.18	2.63	200	8.60	1.69	2.48
390	7.07		0.54	-	250	7.83	1.39	2.59
484	6.32		0.41	3.05	300	7.37	1.13	2.65
583	5.90		0.33	3.05	400	7.01	0.51	2.89
777	4.88		0.40	3.24	500	6.24	0.39	3.05
971	4.09		0.59	-	600	5.82	0.33	3.06
1173	3.54		0.80	3.46	700	5.32	0.37	3.15
					800	4.77	0.41	3.27
					1000	3.99	0.63	3.40
9740	CREST; May 9, 1951; 1906 GCT; 31°55'N, 117°49'W; sounding, 540 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 28°.							
0	15.25		5.77	0.49	0	15.25	5.77	0.49
9	15.21	33.37	5.82	0.47	10	15.20	5.82	0.47
22	14.50		6.00	1.66	20	14.89	6.00	1.10
43	12.03		5.28	1.78	30	13.70	5.85	1.72
64	10.20		4.29	1.82	50	11.25	4.98	1.79
84	9.58		3.62	1.96	75	9.72	3.91	1.87
131	9.35		2.48	2.20	100	9.50	3.19	2.06
173	9.00		1.79	-	150	9.19	2.14	2.31
213	8.84		1.32	2.74	200	8.88	1.46	2.65
259	8.54		0.90	3.04	250	8.61	0.95	2.99
351	7.92		0.74	3.18	300	8.24	0.80	3.14
442	7.10		0.57	3.18	400	7.51	0.65	3.18
539	5.98		0.41	3.28	500	6.37	0.46	3.24
635	5.29		0.34	3.24	600	5.54	0.37	3.26
739	4.96		0.41	3.17	700	5.05	0.37	3.20
9750	CREST; May 9, 1951; 1255 GCT; 31°35'N, 118°29.5'W; sounding, 1300 fm; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 05°.							
0	14.69		5.75	0.56	0	14.69	5.75	0.56
10	14.72		5.90	0.54	10	14.72	5.90	0.54
25	14.69		5.81	0.55	20	14.70	5.86	0.54
50	12.32		5.80	0.84	30	14.62	5.80	0.58
74	10.58		4.43	1.43	50	12.32	5.80	0.84
98	9.66		3.42	-	75	10.58	4.42	(1.47)
151	8.63		3.10	1.95	100	9.60	3.40	
199	8.41		2.04	2.34	150	8.63	3.11	(1.95)
294	7.60		1.00	2.76	200	8.38	2.03	2.35
393	6.89		0.60	-	250	7.97	1.43	2.61
490	6.21		0.43	3.07	300	7.56	0.97	2.77
590	5.54		0.36	3.20	400	6.84	0.60	2.96
784	4.75		0.43	3.20	500	6.15	0.41	3.08
975	3.95		0.64	3.20	600	5.50	0.36	3.20
1176	3.46		0.87	3.07	700	5.07	0.37	3.20
					800	4.69	0.45	3.20
					1000	3.86	0.65	3.19

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 9, 1951; 0655 GCT; 31°15.5'N, 119°10.5'W; sounding, 2000 fm; wind, 330°, force 6; weather, overcast; sea, very rough; wire angle, 30°. 97.60

0	14.85		5.66	0.54	0	14.85	5.66	0.54
8	14.88	33.13	5.65	0.55	10	14.88	5.65	0.55
22	14.82		5.67	0.52	20	14.84	5.67	0.52
48	14.62		5.74	0.55	30	14.76	5.70	0.52
69	12.82		5.57	0.73	50	14.61	5.73	0.56
94	11.56		5.24	0.98	75	12.40	5.48	0.80
140	9.71		3.94	1.59	100	11.28	5.12	1.04
183	8.66		-	1.85	150	9.42	3.74	1.66
273	7.52		1.93	2.48	200	8.39	2.94	1.96
364	6.82		0.76	2.95	250	7.78	2.24	2.31
453	6.26		0.47	-	300	7.29	1.46	2.66
541	5.80		0.32	3.24	400	6.57	0.61	3.03
717	5.07		0.34	3.32	500	6.01	0.36	3.19
904	4.22		0.44	3.32	600	5.53	0.32	3.28
1097	3.64		0.77	3.20	700	5.13	0.34	3.32
					800	4.71	0.35	3.32
					1000	3.90	0.58	3.28

CREST; May 9, 1951; 0059, 0114 GCT; 30°55'N, 119°50.5'W; sounding, 2100 fm; wind, 310°, force 6; weather, partly cloudy; sea, very rough; wire angle, 30°, 35°. 97.70

0	15.54		5.49	0.52	0	15.54	5.49	0.52
8	15.56		5.50	0.50	10	15.55	5.50	0.50
					20	15.52	5.57	0.52
20	15.52		5.57	0.52	30	15.50	5.60	0.52
43	15.50		5.60	0.50	50	15.53	5.55	0.50
60	15.59		5.34	0.50	75	14.95	5.56	0.52
80	14.93		5.57	0.52	100	12.80	5.42	0.62
118	11.04		5.23	1.04	150	9.74	4.46	1.40
157	9.50		4.27	1.47	200	8.75	3.65	1.74
234	8.10		3.20	1.95	250	7.87	2.97	2.04
318	7.04		1.92	2.44	300	7.25	2.20	2.34
399	6.20		1.02	2.86	400	6.20	1.02	(2.86)
482	5.82		0.67	-	500	5.76	0.63	(3.14)
650	5.08		0.40	3.25	600	5.33	0.45	(3.22)
829	4.37		0.46	3.24	700	4.86	0.40	3.25
1019	3.75		0.71	-	800	4.48	0.44	3.24
					1000	3.81	0.69	

CREST; May 8, 1951; 1858 GCT; 30°35'N, 120°30'W; sounding, 2150 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 18°. 97.80

0	16.06		4.41	0.56	0	16.06		0.56
9	16.08	33.35	5.61	0.51	10	16.08		0.51
28	16.02		5.49	0.52	20	16.06		0.51
57	15.88		7.04	0.52	30	16.01		0.52
85	15.34		5.41	0.56	50	15.92		0.52
113	12.79		5.48	0.73	75	15.62		0.54
169	9.88		5.49	1.44	100	14.55		0.63
225	8.34		3.34	2.00	150	10.60		1.16
336	6.84		2.00	2.56	200	8.97		1.77
443	5.95		1.00	3.03	250	7.98	2.97	2.14
554	5.32		0.52	3.06	300	7.29	2.37	2.39
661	4.88		0.45	3.36	400	6.28	1.39	2.89
878	4.17		0.50	3.31	500	5.59	0.67	3.03
1088	3.57		0.81	3.34	600	5.11	0.46	3.18
1295	3.12		1.07	3.23	700	4.73	0.45	3.36
					800	4.40	0.48	3.34
					1000	3.80	0.65	3.31

S10

CCOFI 5105

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
97.90	CREST; May 8, 1951; 1226 GCT; 30°15'N, 121°11'W; sounding, 2150 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 22°.							
0	16.54		5.33	0.52	0	16.54	5.34	0.52
9	16.56	33.40	5.36	0.52	10	16.56	5.36	0.52
23	16.52		5.53	0.50	20	16.53	5.51	0.50
50	16.34		5.40	0.50	30	16.44	5.53	0.50
73	16.43		5.46	0.54	50	16.34	5.40	0.50
99	14.46		5.52	1.05	75	16.43	5.48	0.55
147	11.56		-	-	100	14.30	5.51	1.08
193	9.66		3.93	2.17	150	11.55	4.72	1.64
288	7.72		2.81	2.72	200	9.49	3.84	2.22
388	6.46		1.68	3.12	250	8.43	3.24	2.53
483	5.74		-	3.18	300	7.52	2.69	2.79
579	5.24		0.48	3.38	400	6.35	1.57	3.15
770	4.50		0.42	3.28	500	5.63	0.80	3.19
965	3.85		0.68	-	600	5.14	0.45	3.38
1161	3.38		0.89	-	700	4.75	0.40	3.33
					800	4.41	0.44	
					1000	3.75	0.74	
100.30	CREST; May 10, 1951; 0508 GCT; 31°39.5'N, 116°46.5'W; sounding, 240 fm; wind, 140°, force 1; weather, overcast; sea, slight; wire angle, 11°.							
0	15.76		5.30	0.50	0	15.76	5.30	0.50
10	15.28	33.31	5.34	0.50	10	15.28	5.34	0.50
25	13.26		5.27	0.64	20	14.05	5.31	0.54
49	10.62		3.72	1.46	30	12.20	5.18	0.86
73	9.40		2.80	1.86	50	10.53	3.72	1.48
97	9.28		2.04	2.20	75	9.38	2.71	1.90
148	9.13		1.55	-	100	9.27	2.00	2.22
194	8.97		1.22	2.58	150	9.10	1.54	2.42
241	8.74		0.83	-	200	8.93	1.19	2.61
287	8.49		0.66	2.95	250	8.69	0.78	
342	7.98		0.58	2.95	300	8.38	0.64	2.96
100.40	CREST; May 10, 1951; 1155 GCT; 31°21'N, 117°27'W; sounding, 950 fm; wind, 220°, force 1; weather, overcast; sea, moderate; wire angle, 00°.							
0	15.40		5.74	0.56	0	15.40	5.74	0.56
10	15.30		5.99	0.57	10	15.30	5.99	0.57
25	13.60		5.99	0.60	20	14.15	5.99	0.58
50	11.96		5.57	0.92	30	13.17	5.97	0.62
74	10.79		4.91	1.27	50	11.96	5.57	0.92
98	9.96		4.45	1.50	75	10.75	4.88	1.27
150	9.11		2.94	2.08	100	9.91	4.37	1.52
197	8.67		2.54	2.26	150	9.11	2.94	2.08
290	7.82		1.42	2.62	200	8.64	2.50	2.28
388	6.64		0.82	3.07	250	8.18	1.96	2.46
481	6.18		0.45	3.23	300	7.71	1.34	2.66
578	5.52		0.33	3.30	400	6.56	0.76	3.10
771	4.72		0.41	3.36	500	6.07	0.40	3.25
959	4.12		0.59	-	600	5.40	0.34	3.31
1158	3.58		0.75	3.33	700	4.97	0.37	3.35
					800	4.61	0.43	3.36
					1000	3.98	0.64	3.33

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 10, 1951; 1845 GCT; 31°01'N, 118°07'W; sounding, 1000 fm; wind, 220°, force 1; weather, overcast; sea, moderate; wire angle, 13°. 100.50

0	15.25	5.39	0.54	0	15.25	5.39	0.54
10	15.20	5.65	0.52	10	15.20	5.65	0.52
23	15.18	5.61	0.53	20	15.19	5.64	0.53
49	12.64	5.26	0.92	30	14.96	5.53	0.57
72	10.10	3.65	1.23	50	12.40	5.20	0.94
96	8.96	3.32	1.92	75	9.94	3.58	1.28
146	8.48	2.80	2.16	100	8.89	3.27	1.94
193	8.02	1.95	2.49	150	8.44	2.74	2.19
285	7.56	1.04	2.95	200	7.98	1.88	2.54
382	6.81	0.72	3.12	250	7.72	1.34	2.83
475	6.06	0.45	3.35	300	7.47	0.96	2.99
572	5.54	0.44	3.30	400	6.65	0.67	3.17
764	4.66	0.53	3.37	500	5.91	0.45	3.36
950	4.05	0.51	3.36	600	5.42	0.45	3.31
1151	3.55	0.79	-	700	4.95	0.51	3.34
				800	4.50	0.53	3.37
				1000	3.94	0.55	(3.34)

CREST; May 11, 1951; 0021 GCT; 30°40.5'N, 118°47.5'W; sounding, 1700 fm; wind, 270°, force 3; weather, overcast; sea, rough; wire angle, 10°. 100.60

0	14.98	5.92	0.52	0	14.98	5.92	0.52
10	15.04	6.01	0.53	10	15.04	6.01	0.53
25	14.65	5.98	0.53	20	14.93	6.01	0.53
49	13.47	5.76	0.72	30	14.35	5.95	0.55
73	11.84	5.18	0.96	50	13.39	5.73	0.72
97	10.78	4.69	1.24	75	11.67	5.15	0.98
148	8.94	3.24	-	100	10.53	4.59	1.29
194	8.63	2.13	2.24	150	8.92	3.17	1.91
286	7.12	1.89	-	200	8.58	2.11	(2.27)
383	6.14	1.15	2.93	250	7.77	1.97	(2.44)
477	5.70	0.68	3.14	300	6.92	1.84	(2.58)
572	5.28	0.49	3.24	400	6.03	1.04	2.99
765	4.62	0.42	3.38	500	5.59	0.61	3.18
				600	5.15	0.46	3.27
				700	4.80	0.43	3.34

S10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
100.70	CREST; May 11, 1951; 0539, 0724 GCT; 30°21'N, 119°28.5'W; sounding, 2100 fm; wind, 270°, force 5; weather, overcast; sea, rough; wire angle, 18°, 12°.							
0	16.66		4.85	0.56	0	16.66	4.85	0.56
10	16.70	33.43	5.35	0.54	10	16.70	5.35	0.54
23	16.68		5.50	0.52	20	16.69	5.47	0.52
52	15.28		5.68	0.51	30	16.61	5.57	0.51
76	13.30		5.38	0.53	50	15.29	5.68	0.51
104	11.49		4.90	0.72	75	13.40	5.39	0.53
154	9.86		4.07	1.41	100	11.83	4.95	0.66
204	8.86		2.88	1.80	150	10.00	4.15	1.36
304	7.44		1.95	2.35	200	8.93	2.95	1.77
409	6.54		0.81	-	250	8.16	2.44	2.06
510	5.94		0.49	3.14	300	7.49	2.00	2.32
611	5.32		0.40	3.21u	400	6.60	0.85	2.80
809	4.44		0.51	3.28	500	6.01	0.50	3.12
1008	3.87		0.68	3.31	600	5.41	0.38	3.23
1207	2.38		0.90	3.19	700	4.90	0.41	3.26
					800	4.48	0.51	3.28
612a)	5.35		0.34	3.26	1000	3.88	0.68	3.30
1049	3.79		0.70	3.28	1200	3.39	0.81	3.20
1261	3.30		0.87	3.20	1500	2.87	1.18	3.14
1576	2.73		1.29	3.13	2000	2.12	1.85	2.98
1837	2.31		1.64	-	2500	1.81	2.33	2.89
2099	2.02		1.97	2.92	3000	1.67	2.67	2.80
2363	1.87		2.26	-				
2626	1.76		2.38	2.90				
2913	1.68		2.65	2.82				
3250	1.63		2.70	2.76				
100.80	CREST; May 11, 1951; 1404 GCT; 30°01'N, 120°09'W; sounding, 2150 fm; wind, 340°, force 5; weather, partly cloudy; sea, rough; wire angle, 23°.							
0	15.96		5.61	0.50	0	15.96	5.61	0.50
9	15.98	33.28	5.54	0.51	10	15.97	5.54	0.51
23	15.96		5.54	0.48	20	15.96	5.54	0.48
50	15.86		5.55	0.54	30	15.94	5.55	0.49
73	14.79		5.64	0.69	50	15.86	5.55	0.54
100	12.60		5.52	1.12	75	14.35	5.64	0.72
148	10.06		4.61	1.58	100	12.60	5.52	1.12
195	8.76		3.63	2.08	150	9.95	4.55	1.60
291	7.56		2.47	2.57	200	8.70	3.58	2.11
391	6.64		1.15	3.04	250	8.02	2.98	2.39
488	5.80		0.72	3.22	300	7.47	2.36	2.62
585	5.42		0.45	3.32	400	6.55	1.09	3.06
778	4.62		0.40	3.48	500	5.74	0.68	3.24
979	3.96		0.59	3.39	600	5.35	0.44	3.33
1170	3.50		0.83	3.27	700	4.89	0.40	3.42
					800	4.56	0.41	3.48
					1000	3.89	0.62	3.38

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

100.90

CREST; May 11, 1951; 1931 GCT; 29°40.5'N, 120°49.5'W; sounding, 2200 fm; wind, 340°, force 6; weather, overcast; sea, very rough; wire angle, 32°.

0	16.50		5.50	0.49	0	16.50	5.50	0.49
9	16.51	33.40	5.48	0.50	10	16.50	5.47	0.50
21	16.48		5.46	0.50	20	16.48	5.46	0.50
47	16.24		5.40	0.50	30	16.40	5.43	0.50
68	16.19		5.47	0.52	50	16.24	5.41	0.50
93	14.92		5.60	0.56	75	16.14	5.52	0.53
136	12.18		4.98	0.96	100	14.17	5.59	0.58
183	9.66		4.37	1.65	150	11.48	4.77	1.20
273	8.00		3.64u	2.06	200	9.28		1.75
367	6.82		1.75	2.50	250	8.38		1.97
458	6.00		0.80	3.06	300	7.63		2.18
548	5.48		0.52	3.28	400	6.50	1.34	2.72
728	4.68		0.40	3.34	500	5.74	0.64	3.21
923	4.00		0.59	3.37	600	5.22	0.46	3.31
1122	3.47		0.80	3.22	700	4.78	0.41	3.34
					800	4.40	0.45	3.34
					1000	3.77	0.67	3.35

100.100

CREST; May 12, 1951; 0050 GCT; 29°20.5'N, 121°27'W; sounding, 2150 fm; wind, 350°, force 6; weather, partly cloudy; sea, very rough; wire angle, 26°.

0	16.73		5.32	0.52	0	16.73	5.32	0.52
9	16.76	33.47	5.27	0.50	10	16.75	5.27	0.50
22	16.72		5.32	0.48	20	16.73	5.32	0.49
50	16.64		5.21	0.48	30	16.70	5.29	0.48
72	16.34		5.35	0.50	50	16.64	5.21	0.48
98	15.92		5.39	0.50	75	16.34	5.36	0.50
146	12.16		4.95	0.92	100	15.63	5.35	0.51
192	9.92		4.01	-	150	11.90	4.90	(0.98)
282	7.94		2.88	2.21	200	9.73	3.86	
378	6.75		1.51	2.83	250	8.60	3.21	
469	6.06		0.89	3.12	300	7.66	2.65	2.33
561	5.52		0.50	3.26	400	6.56	1.30	2.92
746	4.67		0.40	3.32	500	5.87	0.73	3.18
939	4.02		0.61	3.30	600	5.32	0.47	3.28
1122	3.53		0.79	3.10	700	4.86	0.40	3.32
					800	4.46	0.44	3.32
					1000	3.86	0.69	3.25

100.110

CREST; May 12, 1951; 0644 GCT; 29°00.5'N, 122°07'W; sounding, 2260 fm; wind, 350°, force 6; weather, clear; sea, very rough; wire angle, 30°.

0	17.00		5.38	0.50	0	17.00	5.38	0.50
9	17.01	33.44	5.43	0.51	10	17.00	5.42	0.50
22	16.98		5.40	0.50	20	16.98	5.41	0.50
48	16.58		5.48	0.50	30	16.92	5.40	0.50
69	16.26		5.49	0.52	50	16.56	5.47	0.50
93	14.36		5.56	0.59	75	15.95	5.51	0.54
136	11.78		5.01	1.04	100	13.74	5.55	0.63
179	9.92		4.10	1.54	150	11.19	4.71	1.20
263	8.32		3.09	2.86u	200	9.37	3.81	
353	7.64		1.33	2.84	250	8.51	3.27	
438	7.12		0.75	3.02	300	7.98	2.35	
525	6.08		0.57	3.22	400	7.35	0.95	2.96
698	4.96		0.38	3.42	500	6.38	0.61	3.17
876	4.34		0.54	-	600	5.46	0.46	3.32
1066	3.87		0.61	-	700	4.94	0.38	(3.42)
					800	4.58	0.45	
					1000	4.01	0.60	

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5105

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

100.120 CREST; May 12, 1951; 1207, 1405 GCT; 28°40.5'N, 122°46'W; sounding, 2300 fm; wind, 350°, force 5; weather, cloudy; sea, very rough; wire angle, 26°, 26°.

0	16.94		4.67u	0.50	0	16.94		0.50
9	16.93	33.42	5.60	0.49	10	16.93	5.60	0.49
22	16.96		5.40	0.50	20	16.94	5.42	0.50
47	16.22		5.50	0.48	30	16.94	5.44	0.49
68	16.12		5.43	0.50	50	16.18	5.49	0.48
92	13.98		5.42	0.58	75	16.08	5.43	0.51
137	11.13		5.36	1.23	100	13.08	5.43	0.66
183	9.91		2.49	2.15	150	10.71	4.84	1.48
277	9.22		-	-	200	9.72	(2.17)	(2.31)
374	8.04		1.21	2.82	250	9.37	(1.74)	(2.49)
469	6.94a)		0.75	3.11	300	8.98	(1.51)	(2.62)
565	6.06		0.47	3.25	400	7.72	1.09	2.92
758	4.85		0.40	3.48	500	6.66	0.61	3.17
960	4.11		0.58	-	600	5.77	0.46	3.29
1160	3.62		0.77	-	700	5.16	0.42	3.43
					800	4.65	0.43	
608b)	5.72		0.45	3.10	1000	4.09	0.54	
1017	4.12		0.56	3.20	1200	3.57	0.79	
1222	3.55		0.77	3.16	1500	2.96	1.10	3.11
1537	2.90		1.13	3.10	2000	2.17	1.75	2.94
1808	2.4 c)		1.51	-	2500	1.83	2.26	2.82
2102	2.09		1.87	2.90	3000	1.64	2.62	2.74
2376	1.90		2.14	2.85				
2656	1.75		2.43	2.78				
2991	1.65		2.61	2.74				
3373	1.58		2.88	2.63				

103.35 CREST; May 6, 1951; 0227 GCT; 30°55.5'N, 116°45'W; sounding, 1170 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 35°.

0	15.02		5.33	0.54	0	15.02	5.33	0.54
8	15.04		5.63	0.53	10	15.04	5.74	0.53
21	15.00		5.94	0.54	20	15.00	5.94	0.54
41	13.30		5.73	0.60	30	14.87	5.90	0.56
62	11.02		5.19	1.04	50	11.87	5.50	0.68
82	10.56		4.66	1.38	75	10.62	4.83	1.28
123	9.49		3.28	1.80	100	10.70	4.13	1.58
158	9.30		1.92	2.34	150	9.32	2.14	2.24
228	9.24		1.18	2.61	200	9.26	1.43	2.52
301	9.07		0.62	3.02u	250	9.20	0.96	
372	8.39		0.59	2.96	300	9.07	0.63	
448	7.38		0.50	3.07	400	7.95	0.56	3.01
599	5.87		0.32	3.20	500	6.81	0.43	3.11
756	4.97		0.36	3.27	600	5.86	0.33	3.20
938	4.36		0.42	3.26	700	5.26	0.35	3.25
					800	4.78	0.38	3.27
					1000	(4.17)		

a) Mean value of 6.90 and 6.97°C.
b) Overlapping casts; reconciliation of property curves when necessary.
c) Temperature inferred from pressure thermometer and wire depth.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 5, 1951; 2231 GCT; 30°45.5'N, 117°05.5'W; sounding, 920 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 21°. 103.40

0	15.24		5.62	0.54	0	15.24	5.62	0.54
10	15.26	33.23	5.63	0.54	10	15.26	5.63	0.54
23	15.10		5.67	0.54	20	15.17	5.66	0.54
46	14.65		5.82	0.53	30	14.95	5.72	0.54
69	12.98		5.82	0.68	50	14.47	5.84	0.54
90	12.18		5.30	0.92	75	12.93	5.77	0.75
139	9.57		3.56	1.82	100	11.27	4.86	1.07
183	9.41		2.26	2.23	150	9.50	3.15	1.99
272	8.76		1.80	2.52	200	9.33	2.16	2.30
366	7.88		0.87	2.95	250	8.94	1.93	2.46
456	6.94		0.50	-	300	8.50	1.50	2.63
551	6.06		0.41	3.20	400	7.52	0.72	3.04
736	4.90		0.36	3.32	500	6.52	0.45	3.17
922	4.25		0.56	3.34	600	5.71	0.40	3.22
1119	3.70		0.67	-	700	5.10	0.37	3.30
					800	4.64	0.40	3.34
					1000	4.01	0.62	

CREST; May 5, 1951; 1613 GCT; 30°25.5'N, 117°45.5'W; sounding, 1450 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 15°. 103.50

0	15.18		5.45	0.52	0	15.18	5.45	0.52
10	15.21	33.17	5.52	0.57	10	15.21	5.52	0.57
24	15.20		5.60	0.52	20	15.20	5.60	0.53
48	15.17		5.57	0.52	30	15.20	5.60	0.52
72	14.88		5.56	0.54	50	15.16	5.57	0.52
96	12.86		5.72	0.68	75	14.81	5.57	0.55
146	10.44		4.38	1.36	100	12.57	5.72	0.74
191	9.23		3.62	1.76	150	10.30	4.27	1.40
282	7.66		2.28	-	200	9.05	3.49	(1.82)
377	6.49		1.06	2.85	250	8.16	2.74	(2.14)
468	6.29		0.56	3.08	300	7.40	2.00	(2.45)
563	5.71		0.36	3.20	400	6.39	0.90	2.91
752	4.74		0.36	3.26	500	6.15	0.46	3.13
937	4.16		0.52	-	600	5.45	0.36	3.22
1135	3.64		0.76	3.26	700	4.95	0.36	3.26
					800	4.56	0.37	3.26
					1000	3.99	0.58	3.29

CREST; May 5, 1951; 0953 GCT; 30°06'N, 118°25.5'W; sounding, 1925 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 09°. 103.60

0	15.98		4.28	0.52	0	15.98	4.28	0.52
10	15.98	33.23	4.33	0.53	10	15.98	4.33	0.53
25	15.66		3.93	0.54	20	15.85	4.10	0.54
49	15.52		4.93	0.55	30	15.60	3.95	0.54
73	15.06		4.55	0.56	50	15.52	4.93	0.55
96	13.20		4.13	0.79	75	15.04	4.49	0.56
146	10.68		2.84	1.36	100	12.90	4.03	0.86
193	9.08		2.69	1.84	150	10.50	2.82	1.39
287	8.15		1.56	2.60	200	8.98	2.66	1.90
385	7.44		0.89	2.95	250	8.47	2.10	2.32
479	6.44		0.46	3.18	300	8.05	1.44	2.66
577	5.80		0.40	3.30	400	7.30	0.81	3.00
772	4.78		0.36	3.40	500	6.30	0.43	3.21
964	4.05		0.44	3.35	600	5.66	0.39	3.32
1167	3.54		0.67	3.30	700	5.12	0.37	3.37
					800	4.65	0.36	3.40
					1000	3.94	0.46	3.33

SIO

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
103.70	CREST; May 5, 1951; 0416 GCT; 29°46'N, 119°05.5'W; sounding, 1840 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 14°.							
0	16.92		5.20	0.48	0	16.92	5.20	0.48
10	16.93	33.48	5.21	0.48	10	16.93	5.21	0.48
24	16.58		5.36	0.45	20	16.75	5.33	0.45
48	16.24		5.47	0.46	30	16.46	5.39	0.45
71	14.45		5.65	0.53	50	16.19	5.48	0.46
93	12.18		5.16	0.86	75	13.70	5.64	0.58
143	10.32		4.05	1.37	100	11.80	4.96	0.94
188	9.09		3.20	1.85	150	10.12	3.91	1.44
280	8.09		1.73	2.53	200	8.91	3.01	1.95
378	7.08		0.80	-	250	8.37	2.21	2.32
470	6.61		0.40	3.10	300	7.87	1.49	2.64
566	5.86		0.37	3.16	400	6.96	0.66	2.99
757	4.83		0.39	3.32	500	6.36	0.39	3.12
948	4.16		0.54	3.30	600	5.69	0.38	3.18
1148	3.54		0.77	-	700	5.17	0.39	3.26
					800	4.62	0.40	3.32
					1000	4.02	0.62	
103.80	CREST; May 4, 1951; 2243 GCT; 29°26.5'N, 119°45.5'W; sounding, 2100 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 10°.							
0	17.21		5.33	0.52	0	17.21	5.33	0.52
10	16.54a)	33.40	5.40	0.52	10	16.54	5.40	0.52
25	16.40		5.45	0.50	20	16.43	5.45	0.51
51	16.16		5.41	0.55	30	16.35	5.45	0.50
74	14.02		5.53	0.62	50	16.17	5.41	0.55
98	11.70		4.54	1.22	75	14.02	5.53	0.62
151	9.59		3.62	1.71	100	11.60	4.44	1.26
199	8.80		2.81	2.08	150	9.63	3.64	1.70
294	7.60		1.45	2.66	200	8.80	2.80	2.10
393	6.71		0.69	-	250	8.16	2.05	2.44
490	6.15		0.47	3.20	300	7.54	1.39	2.68
589	5.61		0.34	3.27	400	6.66	0.66	2.99
783	4.62		0.45	3.30	500	6.10	0.45	3.22
974	4.02		0.62	3.28	600	5.55	0.34	3.28
1173	3.52		0.80	-	700	5.00	0.37	3.29
					800	4.56	0.47	3.30
					1000	3.97	0.65	(3.27)
107.35	CREST; May 3, 1951; 1201, 1231 GCT; 30°20'N, 116°23'W; sounding, 1020 fm; wind, 270°, force 3; weather, overcast; sea, rough; wire angle, 30°, 38°.							
0	14.02		5.53	0.45	0	14.02	5.53	0.45
8	14.05	33.40	5.71	0.54	10	14.04	5.73	0.55
21	13.65		5.81	0.55	20	13.89	5.81	0.55
43	10.34		3.63	1.40	30	11.81	5.75	0.59
64	9.66		3.12	1.66	50	9.88	3.40	1.50
83	9.56		2.77	1.85	75	9.59	2.94	1.77
123	9.25		2.58	1.96	100	9.42	2.68	1.91
159	9.21		1.66	-	150	9.20	1.79	2.11
232	8.88		0.87	2.50	200	9.06	1.15	2.40
307	7.59		1.07	2.42	250	8.66	0.92	2.49
					300	7.65	1.10	2.42
405	7.16		0.63	2.84	400	7.18	0.66	2.83
496	6.50		0.33	3.01	500	6.47	0.32	3.01
584	5.91		0.25	3.04	600	5.79	0.26	3.05
679	5.19		0.37	3.14	700	5.07	0.39	
774	4.84		0.41	-				

a) Alternate value, 16.67°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; May 3, 1951; 1631 GCT; 30°10.5'N, 116°43.5'W; sounding, 1600 fm; wind, 300°, force 2; weather, cloudy; sea, moderate; wire angle, 31°.								107.40
0	15.06		5.68	0.58	0	15.06	5.68	0.58
9	15.06	33.24	5.55	0.56	10	15.06	5.55	0.55
22	15.06		5.52	0.54	20	15.06	5.53	0.54
47	13.89		5.49	0.64	30	15.01	5.51	0.55
68	12.18		4.68	1.10	50	13.73	5.48	0.70
93	10.96		4.23	1.42	75	11.73	4.55	1.20
136	9.71		3.11	1.90	100	10.68	4.07	1.50
177	9.36		2.26	2.20	150	9.53	2.82	2.01
259	8.88		1.25	2.57	200	9.24	1.93	2.32
347	7.51		1.04	2.90	250	8.93	1.30	2.53
431	7.06a)		0.55	-	300	8.26	1.12	2.73
514	6.34		0.34	3.20	400	7.18	0.75	3.02
684	5.27		0.33	3.28	500	6.48	0.35	3.18
864	4.47		0.54	3.29	600	5.76	0.34	3.24
1054	3.85		0.60	-	700	5.18	0.35	3.28
					800	4.73	0.45	3.29
					1000	4.00	0.60	
CREST; May 3, 1951; 2218 GCT; 29°50.5'N, 117°23.5'W; sounding, 1270 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 10°.								107.50
0	16.18		5.34	0.47	0	16.18	5.34	0.47
10	15.94	33.33	5.54	0.48	10	15.94	5.54	0.48
25	15.86		5.33	0.48	20	15.86	5.38	0.48
54	15.00		5.60	0.52	30	15.83	5.35	0.48
78	12.79		5.73	0.68	50	15.37	5.56	0.51
107	12.04		5.55	0.88	75	13.17	5.72	0.66
159	9.82		3.20	1.76	100	12.25	5.61	0.83
212	9.15		2.40	2.08	150	10.05	3.48	1.57
316	8.34		1.12	2.64	200	9.28	2.56	2.03
427	7.45		0.60	2.90	250	8.83	1.89	2.30
532	6.52		0.38	3.09	300	8.45	1.28	2.58
637	5.46		0.33	3.13	400	7.66	0.70	2.84
842	4.66		0.41	-	500	6.80	0.43	3.04
1047	3.98		0.62	-	600	5.78	0.34	3.12
1246	3.46		0.83	3.15	700	5.16	0.33	
					800	4.80	0.37	
					1000	4.13	0.56	
CREST; May 4, 1951; 0426 GCT; 29°31'N, 118°03'W; sounding, 2000 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 09°.								107.60
0	15.96		5.56	0.50	0	15.96	5.56	0.50
10	15.73	33.22	5.56	0.48	10	15.73	5.56	0.48
25	15.67		5.51	0.48	20	15.68	5.53	0.48
49	15.51		5.49	0.48	30	15.65	5.51	0.48
72	13.52		5.87	0.52	50	15.50	5.50	0.48
96	12.17		5.33	0.81	75	13.30	5.87	0.54
147	11.08		3.44	1.58	100	12.04	5.15	0.88
193	9.83		2.62	1.98	150	10.97	3.36	1.62
287	8.18		1.57	2.48	200	9.67	2.54	2.03
384	7.28		0.83	2.82	250	8.79	1.95	2.32
478	6.90		0.32	3.00	300	8.04	1.45	2.53
577	6.16		0.33	3.10	400	7.18	0.74	2.86
772	5.08		0.46	3.22	500	6.78	0.32	3.03
1133	3.74		0.72	-	600	5.99	0.35	3.12
					700	5.43	0.41	3.18
					800	4.95	0.48	
					1000	4.18	0.62	

a) Mean value of 7.02 and 7.09°C.

SIO

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5105

	OBSERVED				INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
107.70	CREST; May 4, 1951; 1034 GCT; 29°11'N, 118°43'W; sounding, 1550 fm; wind, 360°, force 3; weather, missing; sea, slight; wire angle, 14°.							
0	16.60		4.95	0.46	0	16.60	4.95	0.46
10	16.58	33.49	4.64	0.48	10	16.58	4.64	0.48
24	16.44		4.57	0.58	20	16.47	4.59	0.57
48	16.44		5.03	0.52	30	16.43	4.60	0.58
72	16.37		4.99	0.54	50	16.44	5.02	0.52
95	14.36		4.96	0.53	75	16.34	4.98	0.54
145	11.30		2.74	1.63	100	13.70	4.95	0.54
191	10.23		1.37	2.04	150	11.17	2.54	1.68
281	9.59		0.92	2.68	200	10.11	1.31	2.11
377	8.59		0.68	2.90	250	9.75	1.05	2.52
468	7.48		0.28	3.06	300	9.42	0.85	2.73
564	6.50		0.25	3.20	400	8.33	0.60	2.94
753	5.06		0.25	3.38	500	7.13	0.27	3.11
939	4.34		0.29	3.30	600	6.19	0.25	3.24
1138	3.71		0.50	3.26	700	5.43	0.25	3.35
					800	4.84	0.25	3.37
					1000	4.14	0.34	3.29
107.80	CREST; May 4, 1951; 1621 GCT; 28°51.5'N, 119°22.5'W; sounding, 2010 fm; wind, 290°, force 3; weather, partly cloudy; sea, very rough; wire angle, 00°.							
0	16.68		5.40	0.52	0	16.68	5.40	0.52
10	16.54	33.43	5.45	0.51	10	16.54	5.45	0.51
25	16.48		5.42	0.50	20	16.48	5.43	0.51
50	15.08		5.78	0.50	30	16.45	5.44	0.50
74	12.76		5.50	0.76	50	15.08	5.78	0.50
99	11.60		4.21	1.32	75	12.70	5.46	0.79
153	9.55		3.46	1.76	100	11.50	4.20	1.34
201	8.80		2.71	2.12	150	9.75	3.50	1.74
297	7.92		1.45	2.61	200	8.83	2.74	2.12
397	6.61		0.82	3.00	250	8.31	2.05	2.40
493	6.23		0.51	3.16	300	7.88	1.42	2.62
593	5.66		0.34	3.26	400	6.58	0.81	3.01
787	4.68		0.38	3.33	500	6.20	0.50	3.17
978	4.01		0.62	3.31	600	5.61	0.34	3.26
1176	3.48		0.88	3.24	700	5.09	0.34	3.31
					800	4.63	0.40	3.33
					1000	3.94	0.66	3.30
107.80	CREST; May 4, 1951; 1755 GCT;[a] 28°51.5'N, 119°22.5'W; sounding, 2010 fm; wind, 290°, force 3; weather, partly cloudy; sea, very rough; wire angle, 00°.							
661	5.09							
684	5.05							
709	4.92							
732	4.88							
757	4.82							
781	4.67							
805	4.57							
830	4.46							
854	4.37							
877	4.31							
902	4.20							
926	4.12							
951	4.08							
976	3.99							
1001	3.88							

a) Test cast.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^5 cm^3/g$	dyn m

HORIZON; May 4, 1951; 0405 GCT; 29°47.5'N, 115°59.5'W; sounding, 950 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 08°. 110.35

0	13.68	33.29	5.48	-	0	13.68	33.29	5.48		24.95	301	0.00
10	13.32	33.33	4.88	0.46	10	13.32	33.33	4.88	0.46	25.06	292	0.03
25	12.18	33.35	4.80	0.66	20	12.68	33.34	4.82	0.54	25.19	279	0.06
54	10.76	33.42	3.59	1.32	30	12.17	33.36	4.76	0.78	25.30	268	0.09
78	9.80	33.69	2.52	1.70	50	10.78	33.40	3.85	1.24	25.59	242	0.14
108	9.71	33.89	2.45	1.98	75	9.85	33.62	2.57	1.66	25.92	211	0.19
161	9.30	34.16	1.40	2.26	100	9.71	33.84	2.45	1.91	26.12	193	0.24
213	8.47	34.14	1.55	2.38	150	9.40	34.15	1.61	2.21	26.41	166	0.33
317	8.07	34.29	0.80	2.60	200	8.60	34.15	1.51	2.35	26.54	154	0.42
427	7.62	34.38	0.34	2.95	250	8.29	34.16	1.32	2.43	26.59	150	0.49
531	6.44	34.35	0.31	3.05	300	8.12	34.26	0.91	2.54	26.70	141	0.57
634	5.66	34.36	0.27	3.09	400	7.76	34.36	0.42	2.90	26.83	130	0.70
838	4.65	34.42	0.36	3.12	500	6.85	34.36	0.31	3.03	26.96	118	0.83
1045	3.86	34.47	0.58	-	600	5.87	34.36	0.29	3.08	27.08	106	0.94
1248	3.34	34.51	0.81	3.08	700	5.29	34.38	0.28	3.10	27.17	99	1.04
					800	4.80	34.41	0.32	3.12	27.25	91	1.14
					1000	4.02	34.46	0.53	3.11	27.38	80	1.31

HORIZON; May 5, 1951; 1936 GCT; 29°35'N, 116°22'W; sounding, 1170 fm; wind, 330°, force 3; weather, cloudy; sea, very rough; wire angle, 16°. 110.40

0	15.20	33.22	4.76	0.48	0	15.20	33.22	4.76	0.48	24.58	337	0.00
9	15.06	33.26	4.99	0.43	10	15.05	33.26	4.98	0.44	24.64	331	0.03
23	14.86	33.24	4.74	0.44	20	14.90	33.24	4.85	0.44	24.66	330	0.07
46	14.75	33.24	4.24a)	0.45	30	14.80	33.24	4.52	0.44	24.68	328	0.10
70	13.52	33.24	4.99	0.53	50	14.63	33.24	4.25	0.46	24.72	325	0.17
93	11.60	33.30	4.63	0.92	75	13.50	33.25	4.96	0.57	24.96	303	0.24
143	10.36	33.98	1.99	2.04	100	11.35	33.25	4.34	1.14	25.45	256	0.31
189	9.14	34.14	1.97	2.16	150	10.18	34.01	1.99	2.07	26.17	189	0.43
279	8.48	34.25	1.22	2.58	200	9.03	34.17	1.87	2.20	26.48	159	0.51
374	7.48	34.27	0.84	2.84	250	8.72	34.23	1.36	2.43	26.58	151	0.59
464	6.88	34.34	0.38	-	300	8.23	34.26	1.12	2.64	26.68	142	0.67
559	6.08	34.36	0.31	3.18	400	7.29	34.28	0.74	2.91	26.83	129	0.80
748	5.02	34.40	0.36	3.24	500	6.62	34.35	0.34	3.13	26.98	116	0.93
937	4.28	34.45	0.49	3.19	600	5.81	34.37	0.31	3.21	27.10	105	1.04
1141	3.61	34.51	0.71	3.16	700	5.26	34.39	0.35	3.24	27.18	98	1.14
					800	4.79	34.42	0.40	3.23	27.26	91	1.24
					1000	4.04	34.46	0.55	3.18	27.37	80	1.41

HORIZON; May 6, 1951; 0125, 0142 GCT; 29°16.5'N, 116°59.5'W; sounding, 2000 fm; wind, 340°, force 4; weather, partly cloudy; sea, high; wire angle, 04°, 04°. 110.50

0	16.04	33.35	4.16	0.44	0	16.04	33.35	4.16	0.44	24.49	345	0.00
10	16.02	33.33	4.15	0.46	10	16.02	33.33	4.15	0.46	24.48	346	0.03
25	15.97	33.39	4.09	-	20	15.99	33.39	4.12	(0.45)	24.53	342	0.07
54	14.80	33.30	4.13	0.50	30	15.90	33.39	4.09	(0.43)	24.55	340	0.10
78	12.52	33.40	4.13	0.96	50	15.40	33.30	4.09	(0.47)	24.60	337	0.17
106	10.48	33.40	3.23	1.36	75	14.00	33.40	4.13	0.87	24.97	301	0.25
					100	10.73	33.40	3.50	1.25	25.60	242	0.32
212	9.60	34.23	1.26	-	150	10.04	33.80	2.20		26.03	202	0.43
321	8.44	34.31	0.76	2.71	200	9.68	34.19	1.39		26.39	168	0.52
425	6.48	34.18	0.73	2.91	250	9.23	34.28	0.98		26.54	155	0.61
529	6.44	34.33	0.27	3.03	300	8.67	34.31	0.80		26.65	145	0.68
734	4.97	34.34	0.27	3.18	400	6.73	34.20	0.73	2.87	26.85	127	0.82
942	4.34	34.45	0.39	3.16	500	6.43	34.30	0.37	3.00	26.96	117	0.94
1145	3.84	34.49	0.54	3.12	600	6.00	34.33	0.27	3.10	27.04	110	1.06
					700	5.16	34.33	0.27	3.16	27.15	101	1.16
					800	4.70	34.37	0.30	3.18	27.23	93	1.26
					1000	4.22	34.47	0.44	3.15	27.36	82	1.44

a) Alternate value, 4.12 ml/L, not used in interpolation.

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Horizon samples on Cruise 5105, it is estimated that the mean effect of evaporation was 0.034‰, with a standard deviation of 0.063‰.

S10
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5105

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
110.60	HORIZON; May 6, 1951; 0650, 0907 GCT; 28°56.5'N, 117°39'W; sounding, 2000 fm; wind, 340°, force 5; weather, partly cloudy; sea, confused; wire angle, 06°, 13°.											
0	16.08	33.39E	4.13	-	0	16.07	33.39	4.13		24.51	343	0.00
10	16.06	33.28	3.99	0.41	10	16.05	33.28	4.00	0.41	24.44	351	0.03
25	16.07	-	4.14	0.42	20	16.05	33.33	4.10	0.42	24.47	347	0.07
54	15.50	33.28E	4.24	0.40	30	16.06	33.34	4.17	0.42	24.48	347	0.10
78	13.74	33.37E	4.24	0.49	50	15.70	33.28	4.24	0.40	24.51	344	0.17
107	11.64	33.55E	3.15	1.14	75	14.15	33.35	4.25	0.47	24.90	308	0.26
160	10.51	-	2.04	-	100	12.00	33.52	4.10	1.02	25.46	255	0.33
					150	10.70		2.23				
915	4.44	34.47E	0.45	3.16								
1056	3.99	34.54E	0.52	3.22								
1199	3.59	34.54E	0.75	3.18								
1343	3.26	34.61E	0.68	3.20								
1484	3.01	34.61E	0.77	3.09								
1627	2.70	34.61E	1.05	3.09								
1770	2.42	34.61E	1.12	-								
1914	2.24	34.61E	1.29	3.04								
2060	2.05	34.63E	1.46	2.90								
2207	1.97	-	1.53	2.86								
110.70	HORIZON; May 6, 1951; 1455 GCT; 28°30.5'N, 118°19'W; sounding, 2100 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 30°.											
0	16.45	33.44E	5.32	0.46	0	16.45	33.44	5.32	0.46	24.47	347	0.00
9	16.43	33.31	5.44	0.46	10	16.43	33.31	5.45	0.46	24.37	357	0.04
22	16.42	33.42E	5.46	0.45	20	16.42	33.42	5.46	0.45	24.46	349	0.07
47	16.04	33.49E	5.52	0.44	30	16.39	33.44	5.48	0.44	24.48	347	0.11
69	14.94	33.57E	5.62	0.52	50	15.95	33.50	5.54	0.45	24.63	334	0.17
93	13.02	33.47E	5.80	0.88	75	14.55	33.57	5.68	0.58	24.99	300	0.25
139	10.91	33.80E	3.28	1.75	100	12.60	33.48	5.78	1.05	25.32	269	0.33
181	10.33	34.09E	2.21	2.19	150	10.70	33.89	2.90	1.90	25.98	206	0.45
265	9.67	34.42E	1.34	2.52	200	10.14	34.20	1.93	2.30	26.32	175	0.54
354	8.71	34.38E	0.89	2.82	250	9.77	34.42	1.44	2.47	26.56	154	0.62
437	7.65	34.36E	0.78	-	300	9.36	34.40	1.14	2.65	26.61	150	0.70
525	6.64	34.31	0.36	3.10	400	8.11	34.37	0.83	2.93	26.78	134	0.84
705	5.28	34.34	0.32	3.23	500	6.89	34.32	0.41	3.08	26.92	122	0.97
902	4.54	34.40	0.43	3.30	600	6.03	34.31	0.32	3.17	27.02	112	1.09
1104	3.98	34.45	0.66	3.30	700	5.32	34.34	0.32	3.23	27.14	102	1.20
					800	4.85	34.37	0.33	3.27	27.21	95	1.30
					1000	4.24	34.43	0.55	3.30	27.33	85	1.48
110.80	HORIZON; May 6, 1951; 1954 GCT; 28°17'N, 118°57'W; sounding, 2050 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 05°.											
0	16.84	33.34	4.79	0.48	0	16.84	33.34	4.79	0.48	24.30	363	0.00
10	16.76	33.44	4.67	0.46	10	16.76	33.44	4.67	0.46	24.39	355	0.04
25	16.42	33.39	4.47	0.47	20	16.59	33.42	4.51	0.47	24.42	353	0.07
49	15.82	33.33	4.72	0.48	30	16.28	33.38	4.48	0.47	24.46	349	0.11
74	14.00	33.15	5.33	0.54	50	15.82	33.33	4.75	0.48	24.52	343	0.18
98	12.92	33.31	4.41	0.80	75	13.90	33.15	5.32	0.56	24.80	318	0.26
152	10.88	33.84	2.65	1.87	100	12.91	33.34	4.32	0.92	25.14	286	0.34
200	10.03	34.13	1.82	2.26	150	10.93	33.83	2.70	1.85	25.90	215	0.46
296	8.92	34.26	0.98	2.62	200	10.01	34.13	1.82	2.26	26.29	178	0.56
394	7.91	34.33	0.55	2.91	250	9.41	34.22	1.28	2.46	26.46	163	0.65
490	6.98	34.33	0.27	3.16	300	8.87	34.27	0.95	2.63	26.59	151	0.73
588	6.08	34.31	0.36a)	3.20	400	7.86	34.33	0.53	2.93	26.79	134	0.87
787	4.92	34.33	0.32	3.32	500	6.89	34.33	0.29	3.17	26.93	121	1.00
979	4.20	34.44	0.50	3.23	600	5.98	34.31	0.35	3.20	27.03	112	1.11
1183	3.62	-	0.92	3.21	700	5.37	34.32	0.30	3.28	27.11	104	1.22
					800	4.85	34.34	0.35	3.31	27.19	97	1.33
					1000	4.13	(34.45)	0.53	3.23	(27.36)	(82)	(1.51)

a) Alternate value, 0.49 ml/L, not used in interpolation.

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m
HORIZON; May 7, 1951; 0102 GCT; 27°56.5'N, 119°36'W; sounding, 2200 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 22°.												110.90
0	16.91	33.25	4.38	0.44	0	16.91	33.25	4.38	0.44	24.22	371	0.00
9	16.84	33.31	4.77	0.40	10	16.83	33.31	4.77	0.40	24.28	366	0.04
22	16.29	33.24	4.62	0.41	20	16.28	33.24	4.71	0.41	24.35	359	0.07
48	16.43	33.40	4.44	0.40	30	16.32	33.25	4.51	0.41	24.35	359	0.11
70	16.19	33.40	4.70	-	50	16.42	33.40	4.44	0.40	24.44	351	0.18
96	14.70	33.26	4.62	0.44	75	16.03	33.39	4.70	0.44	24.52	344	0.27
145	11.00	33.33	3.85	1.14	100	14.45	33.26	4.56	0.44	24.77	321	0.35
193	9.50	33.80	3.05	1.68	150	10.79	33.35	3.77	1.20	25.55	248	0.50
288	7.82	33.96	2.25	2.18	200	9.37	33.82	2.95	1.74	26.16	191	0.61
388	7.06	34.22	0.73	2.84	250	8.39	33.92	2.51	2.00	26.39	169	0.70
484	5.76	34.20	0.50	3.04	300	7.68	33.98	2.13	2.26	26.54	155	0.78
579	5.36	34.31	0.31	3.11	400	6.98	34.22	0.66	2.88	26.83	129	0.92
770	4.69	34.41	0.36	-	500	5.68	34.21	0.48	3.06	26.99	114	1.04
970	4.01	34.49	0.62	3.20	600	5.28	34.33	0.31	(3.13)	27.13	101	1.15
1171	3.52	34.48	0.82	3.14	700	4.92	34.38	0.31	(3.20)	27.21	94	1.25
					800	4.56	34.42	0.41	(3.24)	27.29	88	1.34
					1000	3.91	34.49	0.65	3.20	27.41	77	1.51
HORIZON; May 7, 1951; 0705 GCT; 27°34.5'N, 120°20'W; sounding, 2250 fm; wind, 360°, force 4; weather, partly cloudy; sea, rough; wire angle, 13°.												110.100
0	18.50	33.83	4.09	0.38	0	18.50	33.83	4.09	0.38	24.27	366	0.00
9	18.48	33.84	4.55	0.36	10	18.48	33.84	4.54	0.36	24.29	365	0.04
24	18.40	33.89	4.21	0.34	20	18.44	33.88	4.25	0.35	24.33	361	0.07
53	18.26	33.87	4.45	0.32	30	18.38	33.89	4.22	0.33	24.35	360	0.11
76	18.17	-	4.37	0.34	50	18.28	33.88	4.42	0.32	24.37	359	0.18
106	16.74	33.82	4.52	0.38	75	18.18	33.87	4.37	0.34	24.38	358	0.27
157	12.36	33.64	3.68	0.92	100	17.10	33.83	4.52	0.37	24.62	336	0.36
207	9.81	-	2.91	1.68	150	13.00	33.64	3.84	0.81	25.36	266	0.51
307	8.31	-	1.53	-	200	10.08	(33.83)	3.02	1.58	(26.05)	(202)	(0.63)
409	7.14	34.25	0.69	2.82	250	9.09	(33.98)	2.28	(2.08)	(26.33)	(175)	(0.72)
507	6.20	34.27	0.55	3.01	300	8.40	(34.04)	1.63	(2.39)	(26.48)	(161)	(0.80)
605	5.68	34.23	0.33	3.10	400	7.24	(34.25)	0.74	(2.79)	(26.81)	(130)	(0.95)
800	4.78	34.38	0.38	-	500	6.28	34.27	0.55	3.00	26.96	117	(1.07)
1006	4.00	34.47	0.58	3.12	600	5.70	34.23	0.34	3.10	27.00	114	(1.19)
1210	3.58	34.47	0.74	3.10	700	5.22	34.30	0.35	(3.13)	27.11	104	(1.30)
					800	4.80	34.38	0.38	(3.13)	27.22	94	(1.40)
					1000	4.02	34.47	0.58	(3.12)	27.38	79	(1.58)

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m
110.110	HORIZON; May 7, 1951; 1232, 1410 GCT; 27°13'N, 121°03.5'W; sounding, 2200 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 20°, 16°.											
0	17.98	33.72	4.43	-	0	17.98	33.72	4.43		24.32	362	0.00
9	17.98	33.73	4.51	0.36	10	17.98	33.73	4.52	0.36	24.32	361	0.04
22	16.93	33.48	4.59	0.38	20	16.94	33.48	4.57	0.38	24.38	356	0.07
49	17.10	33.53	4.65	0.38	30	16.95	33.50	4.63	0.38	24.39	355	0.11
72	16.40	33.45	4.46	0.40	50	17.10	33.53	4.60	0.38	24.38	356	0.18
98	16.70	33.87	4.26	0.38	75	16.44	33.45	4.43	0.40	24.48	349	0.27
146	11.58	33.37	3.94	1.08	100	16.69	33.87	4.25	0.39	24.74	324	0.35
193	10.18	33.80	2.95	1.63	150	11.40	33.37	3.90	1.15	25.46	257	0.50
288	9.28	34.29	1.14	2.50	200	10.08	33.87	2.70	1.75	26.08	198	0.61
387	7.86	34.28	0.69	2.82	250	9.59	34.21	1.57	2.26	26.42	166	0.71
483	6.88	34.29	0.47	3.02	300	9.13	34.30	1.07	2.55	26.57	153	0.79
580	6.23	34.33	0.31	3.12	400	7.73	34.28	0.64	2.85	26.77	135	0.93
779	5.01	34.38	0.35	3.25	500	6.78	34.30	0.44	3.03	26.92	122	1.06
984	4.17	34.43	0.52	3.22	600	6.06	34.33	0.31	3.14	27.04	111	1.18
1186	3.64	34.47	0.77	-	700	5.44	34.36	0.31	3.22	27.14	102	1.29
					800	4.94	34.38	0.36	3.25	27.21	95	1.39
613a)	5.96	34.34	0.31	-	1000	4.13	34.45	0.52	3.20	27.36	82	1.57
1024	4.10	34.47	0.54	3.20	1200	3.60	34.48	0.79	3.18	27.44	75	1.73
1229	3.52	34.49	0.84	3.14	1500	2.94	34.52	1.18	3.10	27.53	66	1.94
1537	2.86	34.52	1.21	3.08	2000	2.15	34.60	1.75	2.95	27.66	53	2.24
1792	2.37	34.60	1.48	2.92	2500	1.80		2.30	2.80			
2047	2.11	34.60	1.81	2.95	3000	1.64		2.46	2.70			
2308	1.90	34.60	2.00	2.85								
2571	1.77	34.65	2.34	2.78								
2862	1.67	34.61	2.41	2.72								
3208	1.61	34.61	2.63	2.67								
113.35	HORIZON; May 3, 1951; 2235 GCT; 29°11.5'N, 115°39.5'W; sounding, 840 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 13°.											
0	13.25	33.42	4.15	0.74	0	13.25	33.42	4.15	0.74	25.14	284	0.00
10	12.70	33.41	4.15	0.84	10	12.70	33.41	4.15	0.84	25.24	274	0.03
24	12.54	33.48	4.07	0.84	20	12.57	33.42	4.12	0.84	25.27	271	0.06
52	10.35	33.60	2.97	1.62	30	12.32	33.51	3.97	0.86	25.39	260	0.08
75	9.48	33.77	2.62	1.71	50	11.40	33.59	3.15	1.60	25.63	238	0.13
103	9.50	34.00	1.95	2.12	75	9.48	33.77	2.62	1.71	26.10	194	0.19
154	9.48	34.22	1.14	2.42	100	9.50	33.97	2.08	2.08	26.25	180	0.23
205	9.06	34.31	0.77	2.60	150	9.49	34.21	1.18	2.41	26.44	163	0.32
304	8.27	34.33	0.54	2.74	200	9.10	34.31	0.80	2.58	26.58	150	0.40
408	7.29	34.34	0.32	-	250	8.69	34.32	0.64	2.68	26.66	144	0.47
508	6.48	34.36	0.24	-	300	8.30	34.33	0.55	2.73	26.72	138	0.54
608	5.92	34.38	0.28	3.16	400	7.38	34.34	0.34	(2.94)	26.87	126	0.68
807	4.82	34.43	0.28	3.27	500	6.55	34.36	0.24	(3.13)	27.00	114	0.80
1010	4.00	34.47	0.47	-	600	5.97	34.38	0.28	(3.16)	27.09	106	0.91
1210	3.44	34.49	0.67	-	700	5.37	34.40	0.28	3.22	27.18	98	1.01
					800	4.85	34.43	0.28	3.27	27.26	91	1.11
					1000	4.04	34.47	0.46		27.38	80	1.28

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED					COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^5 cm^3/g$	ΔD dyn m	
HORIZON; May 3, 1951; 1853 GCT; 28°57.5'N, 116°05.5'W; sounding, 550 fm; wind, 350°, force 5; weather, cloudy; sea, very rough; wire angle, 15°.													113.40
0	15.59	33.37E	4.72	0.48	0	15.59	33.37	4.72	0.48	24.61	334	0.00	
10	15.50	33.31	4.71	0.48	10	15.50	33.31	4.71	0.48	24.59	336	0.03	
24	15.50	33.39E	5.06	0.48	20	15.50	33.37	4.97	0.48	24.64	332	0.07	
48	15.02	33.49E	4.58	0.50	30	15.50	33.42	5.04	0.48	24.68	328	0.10	
71	12.64	33.53E	4.05	0.96	50	15.00	33.50	4.53	0.50	24.84	314	0.16	
95	11.30	33.66E	3.50	1.36	75	12.40	33.54	3.97	1.02	25.40	260	0.24	
147	10.07	34.13E	1.84	2.16	100	11.15	33.68	3.36	1.45	25.74	228	0.30	
192	9.46	34.28E	1.46	2.38	150	10.00	34.15	1.82	2.18	26.31	175	0.40	
282	8.60	34.38E	0.81	2.68	200	9.38	34.29	1.40	2.41	26.52	156	0.48	
375	7.27	34.33E	0.65	2.87	250	8.89	34.37	1.02	2.59	26.66	143	0.56	
464	6.67	34.40E	0.32	3.12	300	8.41	34.37	0.75	2.71	26.74	137	0.63	
558	6.16	34.47E	0.28	-	400	7.03	34.34	0.57	2.96	26.92	121	0.76	
648	5.82	34.47E	0.24	3.23	500	6.48	34.43	0.30	3.16	27.06	108	0.88	
745	5.12	34.49E	0.29	3.24	600	5.98	34.47	0.25	3.20	27.16	100	0.98	
934	4.50	34.52E	0.43	3.22	700	5.47	34.48	0.27	3.24	27.23	94	1.08	
					800	4.89	34.51	0.33	3.24	27.32	85	1.17	
					1000	(4.35)	(34.52)			(27.39)	(80)	(1.33)	
HORIZON; May 3, 1951; 1234 GCT; 28°35'N, 116°45'W; sounding, 1950 fm; wind, 330°, force 5; weather, cloudy; sea, very rough; wire angle, 21°.													113.50
0	16.18	33.53E	4.72	0.42	0	16.18	33.53	4.72	0.42	24.60	335	0.00	
9	16.16	33.46	4.57	0.44	10	16.16	33.46	4.57	0.44	24.55	340	0.03	
23	16.16	33.51E	4.57	0.44	20	16.16	33.51	4.57	0.44	24.59	336	0.07	
51	15.64	33.49E	4.61	0.44	30	16.14	33.51	4.59	0.44	24.59	337	0.10	
74	12.54	33.42E	4.66	0.84	50	15.70	33.49	4.60	0.44	24.67	329	0.17	
101	11.39	33.62E	3.57	1.34	75	12.41	33.42	4.64	0.84	25.30	269	0.24	
149	10.19	33.94E	2.62	-	100	11.40	33.62	3.61	1.29	25.65	237	0.31	
198	9.50	34.23E	1.94	2.24	150	10.15	33.94	2.61	1.88	26.12	193	0.42	
293	8.63	34.34E	0.91	2.70	200	9.48	34.24	1.90	2.25	26.46	161	0.51	
393	7.66	34.34E	0.52	-	250	9.00	34.32	1.29	2.52	26.61	149	0.58	
488	6.85	34.40E	0.35	3.11	300	8.57	34.34	0.87	2.73	26.69	142	0.66	
585	6.09	34.45E	0.28	3.18	400	7.60	34.34	0.50	2.99	26.84	129	0.79	
778	5.00	34.49E	0.33	3.26	500	6.75	34.41	0.34	3.11	27.01	113	0.92	
982	4.15	34.51E	0.54	3.20	600	5.99	34.46	0.29	3.19	27.15	101	1.02	
1187	3.61	34.58E	0.83	3.22	700	5.40	34.48	0.30	3.24	27.24	93	1.12	
					800	4.89	34.49	0.35	3.26	27.30	87	1.21	
					1000	4.09	34.51	0.57	3.20	27.41	77	1.38	
HORIZON; May 3, 1951; 0627 GCT; 28°19'N, 117°20'W; sounding, 2000 fm; wind, 350°, force 5; weather, cloudy; sea, very rough; wire angle, 08°.													113.60
0	16.14	33.46E	4.22	-	0	16.14	33.46	4.22		24.55	339	0.00	
10	16.11	33.39	4.39	0.38	10	16.11	33.39	4.39	0.38	24.51	344	0.03	
25	16.12	33.46E	4.25	0.42	20	16.11	33.46	4.35	0.40	24.56	339	0.07	
55	11.58	33.41E	3.98	0.93	30	16.11	33.45	4.19	0.46	24.55	340	0.10	
79	10.54	33.62E	2.74	1.39	50	11.86	33.41	4.06	0.80	25.40	260	0.16	
108	10.04	33.80E	2.56	1.58	75	10.65	33.56	2.85	1.34	25.74	228	0.22	
162	9.04	34.09E	1.85	2.00	100	10.15	33.75	2.63	1.54	25.97	206	0.28	
212	8.83	34.27E	1.21	2.32	150	9.18	34.03	1.98	1.91	26.35	171	0.37	
317	7.82	34.34E	0.65	2.69	200	8.87	34.24	1.34	2.25	26.56	152	0.46	
426	6.91	34.40E	0.39	2.92	250	8.58	34.31	0.90	2.49	26.66	143	0.53	
530	6.19	34.45E	0.28	3.02	300	8.07	34.34	0.69	2.64	26.76	134	0.60	
633	5.48	34.43E	0.26	3.04	400	7.10	34.39	0.45	2.87	26.94	118	0.73	
838	4.57	34.52E	0.36	3.12	500	6.40	34.45	0.30	3.00	27.09	106	0.84	
1047	3.88	34.54E	0.54	3.06	600	5.69	34.43	0.27	3.04	27.16	99	0.94	
1251	3.40	34.60E	0.78	2.98	700	5.15	34.45	0.30	3.07	27.24	92	1.04	
					800	4.73	34.50	0.35	3.12	27.33	84	1.14	
					1000	4.01	34.53	0.50	3.08	27.43	75	1.29	

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
113.70	HORIZON; May 3, 1951; 0045 GCT; 28°01'N, 117°53.5'W; sounding, 1800 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 24°.											
0	16.48	33.46E	4.65	0.38	0	16.48	33.46	4.65	0.38	24.47	347	0.00
9	16.39	33.39	4.11	0.41	10	16.39	33.39	4.11	0.41	24.44	350	0.04
22	16.24	33.47E	5.12	0.42	20	16.25	33.46	5.08	0.42	24.53	342	0.07
50	11.86	33.33E	4.02	0.87	30	16.15	33.46	4.93	0.45	24.55	340	0.10
73	11.17	33.46E	3.75	1.17	50	11.86	33.33	4.02	0.87	25.34	265	0.16
100	10.40	33.73E	2.98	1.61	75	11.08	33.49	3.71	1.22	25.61	241	0.23
149	9.68	34.00E	2.02	2.02	100	10.40	33.73	2.98	1.61	25.91	212	0.29
197	9.06	34.16E	1.93	-	150	9.67	34.00	2.03	(2.02)	26.25	181	0.38
293	8.32	34.33E	0.97	2.64	200	9.04	34.16	1.90	(2.31)	26.47	160	0.47
393	7.40	34.38E	0.53	2.86	250	8.62	34.27	1.38	(2.52)	26.63	147	0.55
489	6.48	34.45E	0.31	-	300	8.29	34.33	0.93	2.66	26.72	138	0.62
586	5.61	34.42E	0.30	3.16	400	7.33	34.38	0.50	2.88	26.90	122	0.75
782	4.69	34.46E	0.33	3.19	500	6.38	34.45	0.30	3.08	27.09	105	0.87
990	3.97	-	0.57	3.18	600	5.53	34.42	0.30	3.16	27.17	98	0.97
1191	3.49	34.59E	0.78	3.20	700	5.04	34.44	0.30	3.18	27.25	91	1.06
					800	4.62	34.47	0.35	3.19	27.32	85	1.15
					1000	3.94	34.54	0.58	3.18	27.45	73	1.31
117.35	HORIZON; May 1, 1951; 2153 GCT; 28°37.5'N, 115°16'W; sounding, 120 fm; wind, 270°, force 4; weather, partly cloudy; sea, high; wire angle, 15°.											
0	14.19	33.40	4.66	-	0	14.19	33.40	4.66		24.93	303	0.00
10	14.01	33.37	4.66	0.43	10	14.01	33.37	4.66	0.43	24.95	302	0.03
24	11.14	33.26	4.47	-	20	13.34	33.27	4.56	0.68	25.01	297	0.06
48	10.06	33.44	4.13	1.28	30	10.78	33.27	4.40	1.10	25.49	251	0.09
72	9.85	33.71	-	1.56	50	10.06	33.46	4.09	1.31	25.76	225	0.14
96	9.68	33.93	2.55	1.80	75	9.82	33.74	3.36	1.58	26.02	201	0.19
148	9.98	34.29	1.12	2.42	100	9.68	33.96	2.41	1.86	26.21	183	0.24
196	9.65	34.38	0.59	2.60	150	9.98	34.30	1.09	2.42	26.43	164	0.33
					200	(9.63)	(34.39)	(0.56)	(2.60)	(26.56)	(153)	(0.40)
117.40	HORIZON; May 2, 1951; 0201 GCT; 28°28.5'N, 115°35'W; sounding, 550 fm; wind, 320°, force 5; weather, partly cloudy; sea, high; wire angle, 17°.											
0	14.33	33.30	4.93	-	0	14.33	33.30	4.93		24.82	313	0.00
10	14.29	33.30	5.26	0.23	10	14.29	33.30	5.26	0.23	24.83	313	0.03
24	14.12	33.33	4.77	0.26	20	14.18	33.32	4.90	0.24	24.87	309	0.06
49	12.50	33.22	5.27	0.50	30	14.00	33.33	4.88	0.30	24.92	305	0.09
73	10.60	33.39	3.95	1.07	50	12.25	33.22	5.28	0.54	25.18	281	0.15
96	9.74	33.62	3.31	1.36	75	10.45	33.42	3.87	1.10	25.66	235	0.22
145	9.55	34.05	2.30	1.94	100	9.68	33.66	3.23	1.39	25.98	205	0.27
190	9.96	34.38	1.00	-	150	9.60	34.09	2.17	(1.99)	26.33	173	0.37
279	9.13	34.45	0.36	-	200	9.94	34.40	0.87		26.51	157	0.45
375	8.12	34.40	0.44	-	250	9.48	34.44	0.51		26.62	148	0.53
466	7.24	34.38	0.31	2.80	300	8.90	34.44	0.42		26.72	139	0.60
564	6.34	34.36	0.25	-	400	7.87	34.39	0.42		26.83	129	0.74
657	5.72	34.40	0.33	3.08	500	6.92	34.37	0.27		26.95	119	0.86
761	5.20	34.42	0.29	-	600	6.08	34.37	0.26		27.07	109	0.98
958	4.41	34.45	0.50	3.04	700	5.50	34.41	0.32		27.17	99	1.08
					800	5.03	34.42	0.30		27.23	94	1.18
					1000	(4.27)	(34.46)			(27.35)	(83)	(1.36)

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

HORIZON; May 2, 1951; 0755 GCT; 28°03'N, 116°18'W; sounding, 2300 fm; wind, 320°, force 7; weather, partly cloudy; sea, very high; wire angle, 21°. 117.50

0	15.56	33.35	4.51	-	0	15.56	33.35	4.51		24.60	335	0.00
10	15.52	33.33	3.87	-	10	15.52	33.33	3.87		24.59	336	0.03
23	15.54	33.31	3.78	0.34	20	15.53	33.31	3.79		24.57	338	0.07
51	13.66	33.31	3.87	0.38	30	15.51	33.30	3.80	0.34	24.57	338	0.10
74	11.85	33.33	3.47	-	50	13.78	33.31	3.85	0.38	24.95	303	0.17
102	10.76	33.58	2.64	1.38	75	11.78	33.33	3.45	0.90	25.35	265	0.24
151	9.49	33.87	2.03	1.74	100	10.80	33.56	2.69	1.35	25.71	231	0.30
202	9.24	34.13	1.32	2.10	150	9.50	33.86	2.04	1.73	26.17	189	0.41
301	-	34.31	0.69	-	200	9.24	34.12	1.35	2.07	26.41	166	0.49
403	7.26	34.31	0.61	2.64	250	9.05	34.27	0.90	(2.32)	26.56	154	0.57
501	6.60	-	0.24	2.90	300	8.63	34.31	0.69	(2.50)	26.66	145	0.65
600	5.78	34.42E	0.21	2.96	400	7.28	34.31	0.61	(2.64)	26.85	126	0.79
796	4.79	34.51E	0.44	-	500	6.61	34.36	0.24	2.90	26.99	115	0.91
1000	4.10	34.54E	0.44	2.91	600	5.78	34.42	0.21	2.96	27.14	101	1.02
1199	3.54	-	0.63	2.98	700	5.21	34.47	0.30	2.98	27.25	91	1.11
					800	4.76	34.51	0.44	2.97	27.34	84	1.20
					1000	4.10	34.54	0.44	2.91	27.43	75	1.36

HORIZON; May 2, 1951; 1457 GCT; 27°53.5'N, 116°58.5'W; sounding, 2000 fm; wind, 340°, force 6; weather, cloudy; sea, high; wire angle, 22°. 117.60

0	16.17	33.42E	4.76	-	0	16.17	33.42	4.76		24.51	342	0.00
9	16.14	33.40	4.42a)	0.38	10	16.14	33.40	4.43	0.38	24.50	343	0.03
23	16.18	33.44E	5.12	0.36	20	16.17	33.43	5.10	0.36	24.52	342	0.06
51	13.04	-	4.77	0.56	30	16.15	33.45	5.11	0.37	24.54	341	0.10
75	11.16	33.49E	3.73	1.12	50	13.18	33.47	4.78	0.55	25.19	279	0.16
103	10.29	33.68E	3.12	1.50	75	11.16	33.49	3.73	1.12	25.59	241	0.23
154	9.54	34.05E	2.43	1.94	100	10.38	33.64	3.20	1.47	25.84	218	0.28
203	9.08	34.25E	1.50	2.29	150	9.58	34.02	2.48	1.90	26.27	178	0.38
302	8.20	34.31E	0.88	2.62	200	9.11	34.24	1.54	2.27	26.52	155	0.47
404	7.32	34.51E	0.46	-	250	8.68	34.28	1.18	2.47	26.62	146	0.54
503	6.26	34.42E	0.30	-	300	8.22	34.31	0.91	2.62	26.71	138	0.62
599	5.40	34.51E	0.36	-	400	7.35		0.47				
793	4.65	34.51E	0.46	3.15	500	6.29		0.30				
1204	3.46	34.61E	0.87	-	600	5.39		0.36				
					700	4.95		0.38				
					800	4.64		0.46				
					1000	4.02		0.65				

HORIZON; May 2, 1951; 1813 GCT; 27°42'N, 117°35.5'W; sounding, 1950 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 12°. 117.70

0	16.26	33.44E	4.22	0.42	0	16.27	33.44	4.22	0.42	24.51	344	0.00
10	16.14	33.37	4.62	0.40	10	16.13	33.37	4.62	0.40	24.48	346	0.03
24	16.12	33.44E	4.28	0.40	20	16.13	33.43	4.34	0.40	24.53	342	0.07
53	14.26	33.37E	4.62	0.45	30	16.10	33.44	4.29	0.40	24.55	341	0.10
77	12.37	33.31E	3.83	0.86	50	14.75	33.39	4.62	0.45	24.81	317	0.17
106	10.64	33.62E	3.68	1.36	75	12.45	33.31	3.88	0.80	25.21	278	0.24
159	9.50	33.98E	2.05	2.00	100	10.90	33.52	3.70	1.25	25.66	236	0.31
210	9.54	-	1.22	2.42	150	9.53	33.93	2.30	1.90	26.22	184	0.41
314	8.32	34.38E	0.95	2.76	200	9.55	(34.37)	1.34	2.34	(26.56)	(152)	(0.50)
421	7.07	34.42E	0.33	3.04	250	9.19	(34.39)	1.04	2.62	(26.63)	(147)	(0.57)
524	6.26	34.40E	0.27	3.08	300	8.49	(34.38)	0.98	2.73	(26.74)	(137)	(0.64)
626	5.60	-	0.33	3.17	400	7.30	34.41	0.38	2.98	26.93	119	(0.77)
828	4.54	-	0.38	3.20	500	6.44	34.41	0.27	3.08	27.05	109	(0.89)
1034	3.80	34.58E	0.59	3.19	600	5.75		0.33	3.16			
1236	3.38	34.59E	-	-	700	5.19		0.35	3.18			
					800	4.67		0.36	3.20			
					1000	3.90		0.55	3.19			

a) Alternate value, 4.29 ml/L, not used in interpolation.

SIO

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5105

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
120.35	HORIZON; May 10, 1951; 0731 GCT; 28°03.5'N, 114°54.5'W; sounding, 43 fm; wind, 360°, force 5; weather, partly cloudy; sea, moderate; wire angle, 03°.											
0	16.10	-	4.70	0.51	0	16.10	(33.49)	4.70	0.51	(24.59)	(336)	(0.00)
10	16.08	33.49	4.89	0.48	10	16.08	33.49	4.89	0.48	24.59	336	0.03
25	15.69	33.58E	4.38	0.49	20	15.95	33.58	4.55	0.48	24.69	327	0.07
50	13.30	33.51E	4.78	0.86	30	15.18	33.58	4.38	0.50	24.86	311	0.10
					50	13.30	33.51	4.78	0.86	25.20	279	0.16
120.45	HORIZON; May 10, 1951; 0125 GCT; 27°42.5'N, 115°33'W; sounding, 1350 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 23°.											
0	15.06	33.49E	5.56	0.48	0	15.06	33.49	5.55	0.48	24.82	314	0.00
9	14.97	33.50	5.63	0.51	10	14.97	33.50	5.63	0.51	24.84	312	0.03
23	14.66	33.49E	5.68	0.50	20	14.70	33.49	5.69	0.50	24.89	307	0.06
47	11.16	33.55E	3.77	1.48	30	14.50	33.50	4.38	0.90	24.94	303	0.09
74	10.58	33.78E	2.73	1.80	50	11.05	33.57	3.63	1.51	25.67	234	0.15
					75	(10.60)	(33.78)	(2.73)	(1.80)	(25.92)	(211)	(0.20)
120.50	HORIZON; May 9, 1951; 2144 GCT; 27°33'N, 115°52'W; sounding, 2100 fm; wind, 340°, force 3; weather, cloudy; sea, very rough; wire angle, 10°.											
0	16.18	33.62E	5.55	0.46	0	16.18	33.62	5.55	0.46	24.67	328	0.00
10	16.05	33.49E	5.17	0.46	10	16.06	33.49	5.17	0.46	24.59	336	0.03
25	16.00	33.56E	4.48	0.47	20	16.01	33.51	4.73	0.47	24.62	333	0.07
54	11.65	33.89E	3.00	1.64	30	16.02	33.60	4.12	0.64	24.69	327	0.10
78	10.28	33.93E	2.21	2.08	50	12.55	33.87	3.10	1.53	25.63	238	0.16
107	9.33	34.00E	2.43	2.12	75	10.46	33.92	2.21	2.04	26.05	198	0.21
160	9.22	34.27E	1.58	2.43	100	9.46	33.98	2.43	2.11	26.27	178	0.26
214	8.74	-	1.31	2.60	150	9.23	34.21	1.73	2.38	26.48	159	0.34
318	8.28	34.42E	0.53	2.88	200	8.89	(34.32)	1.36	2.56	(26.63)	(146)	(0.42)
426	7.12	34.42E	0.56	3.06	250	8.52	(34.37)	0.98	2.69	(26.73)	(138)	(0.49)
530	6.24	34.42E	0.32	3.18	300	8.35	(34.41)	0.60	2.83	(26.78)	(133)	(0.56)
633	5.58	34.45E	0.30	3.20	400	7.49	34.42	0.55	3.02	26.91	121	(0.69)
837	4.71	34.42E	0.35	3.24	500	6.48	34.42	0.37	3.16	27.05	109	(0.80)
1045	3.99	34.34E	0.58	3.22	600	5.78	34.44	0.29	3.20	27.16	99	(0.91)
1248	3.54	33.84E	0.74	3.22	700	5.27	34.45	0.30	3.22	27.23	93	(1.00)
					800	4.85	34.42	0.33	3.24	27.25	91	(1.10)
					1000	4.13		0.52	3.23			

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

HORIZON; May 9, 1951; 1323, 1449 GCT; 27°11.5'N, 116°36.5'W; sounding, 2100 fm; wind, 340°, force 5; weather, overcast; sea, high; wire angle, 12°, 21°. 120.60

0	16.82	33.49E	4.69	0.52	0	16.82	33.49	4.69	0.52	24.42	352	0.00
10	16.80	33.44	5.13	0.50	10	16.80	33.44	5.13	0.50	24.38	356	0.04
24	16.82	33.49E	5.23	0.50	20	16.81	33.48	5.22	0.50	24.41	353	0.07
53	15.50	33.49E	5.57	0.52	30	16.81	33.49	5.29	0.50	24.42	353	0.11
77	12.70	33.42E	5.08	0.85	50	16.60	33.49	5.57	0.52	24.47	349	0.18
105	11.00	33.62E	3.85	1.44	75	12.85	33.42	5.18	0.78	25.22	278	0.26
158	9.96	33.95E	2.63	2.00	100	11.23	33.58	4.03	1.35	25.65	237	0.32
210	9.28	34.27E	1.93	2.32	150	10.08	33.91	2.77	1.94	26.11	194	0.43
311	8.17	34.24E	0.92	2.74	200	9.39	34.23	2.07	2.27	26.47	161	0.52
418	7.04	34.33E	0.50	3.02	250	8.84	34.27	1.42	2.51	26.59	150	0.60
520	6.30	34.41E	0.38	3.12	300	8.28	34.24	0.99	2.70	26.66	145	0.67
622	5.64	34.41E	0.31	3.22	400	7.24	34.32	0.53	2.99	26.87	125	0.81
824	4.72	34.49E	0.25	-	500	6.44	34.40	0.40	3.10	27.04	110	0.93
1031	4.02	34.57E	0.63	3.27	600	5.79	34.41	0.32	3.20	27.13	102	1.03
1235	3.47	34.65E	0.92	3.20	700	5.21	34.43	0.28	3.27	27.22	94	1.13
					800	4.79	34.48	0.25	3.31	27.31	86	1.22
565a)	6.19	-	0.35	3.20	1000	4.14	34.56	0.59	3.29	27.44	74	1.38
937	4.38	-	0.47	3.33	1200	3.55		0.86	3.21			
1124	3.75	-	0.71	-	1500	2.90		1.07	3.21			
1401	3.10	-	0.97	3.21	2000	2.13		1.85	3.07			
1639	3.64	-	1.42	3.20	2500	1.80		2.31	2.90			
1874	2.28	-	1.71	3.13								
2117	2.02	-	1.97	3.02								
2360	1.87	-	2.28	-								
2621	1.75	-	2.37	2.88								
2918	1.68	-	2.66	2.86								

HORIZON; May 9, 1951; 0756 GCT; 26°51.5'N, 117°13.5'W; sounding, 2150 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 15°. 120.70

0	17.32	33.48	5.07	0.50	0	17.32	33.48	5.07	0.50	24.29	364	0.00
10	17.29	33.51	4.99	0.50	10	17.29	33.51	4.99	0.50	24.32	361	0.04
24	17.24	33.45	4.83	-	20	17.26	33.47	4.87	0.50	24.30	364	0.07
48	15.06	33.41	5.38	0.61	30	17.21	33.43	4.86	0.51	24.28	366	0.11
71	12.06	33.55	3.93	-	50	14.13	33.41	5.40	0.66	24.95	303	0.18
94	10.80	33.67	3.18	1.58	75	11.75	33.57	3.73	1.26	25.55	246	0.25
144	10.15	34.11	1.89	2.17	100	10.63	33.70	3.06	1.65	25.85	218	0.30
190	9.99	34.33	1.06	2.50	150	10.13	34.15	1.72	2.23	26.29	178	0.40
280	9.29	34.43	0.35	2.82	200	9.95	34.34	0.93	2.54	26.46	162	0.49
375	7.70	34.30	0.54	2.91	250	9.60	34.41	0.50	2.74	26.58	151	0.57
466	6.94	34.33	0.32	3.06	300	9.02	34.42	0.37	2.85	26.68	143	0.64
561	6.07	-	0.31	3.08	400	7.48	34.30	0.46	2.97	26.82	130	0.78
748	5.05	34.42	0.25	3.16	500	6.58	34.35	0.32	3.07	26.98	115	0.90
938	4.26	34.43	0.44	3.17	600	5.83	34.38	0.28	3.10	27.10	104	1.01
1137	3.71	34.49	0.71	3.14	700	5.29	34.41	0.25	3.14	27.20	96	1.11
					800	4.80	34.43	0.29	3.16	27.27	90	1.21
					1000	4.06	34.44	0.53	3.17	27.36	82	1.38

a) Overlapping casts; reconciliation of property curves when necessary.

S10

CCOFI 5105

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m

120.80 HORIZON; May 9, 1951; 0156 GCT; 26°31'N, 117°52'W; sounding, 2050 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 12°.

0	17.44	33.48	4.85	0.44	0	17.44	33.48	4.85	0.44	24.27	366	0.00
10	17.39	33.49	5.07	0.46	10	17.39	33.49	5.07	0.46	24.29	365	0.04
24	17.04	33.44	5.10	0.50	20	17.20	33.46	5.09	0.49	24.31	363	0.07
54	16.34	33.42	5.19	0.48	30	16.89	33.43	5.12	0.50	24.36	359	0.11
78	14.68	33.38	5.25	0.48	50	16.42	33.42	5.18	0.49	24.46	350	0.18
106	11.93	33.51	5.34	0.98	75	14.84	33.38	5.24	0.48	24.78	320	0.26
158	10.76	34.05	1.78	-	100	12.19	33.48	5.33	0.69	25.39	262	0.34
209	10.14	34.30	1.36	2.48	150	10.88	33.93	2.27	2.16	25.98	206	0.46
310	9.22	34.38	0.63	2.78	200	10.23	34.28	1.38	2.43	26.37	171	0.55
416	7.39	34.34	0.48	2.97	250	9.76	34.35	1.16	2.65	26.50	159	0.63
517	6.74	34.40	0.22	3.17	300	9.31	34.38	0.73	2.76	26.60	150	0.71
618	5.84	34.36	0.26	3.21	400	7.55	34.34	0.52	2.94	26.84	128	0.85
820	4.75	34.47	0.34	3.24	500	6.84	34.40	0.24	3.15	26.99	115	0.98
1025	4.04	34.45	0.58	3.22	600	5.97	34.36	0.25	3.21	27.07	108	1.09
1226	3.48	34.52	0.80	3.18	700	5.34	34.39	0.28	3.23	27.17	99	1.19
					800	4.84	34.46	0.32	3.24	27.29	88	1.29
					1000	4.11	34.45	0.55	3.22	27.36	82	1.46

120.90 HORIZON; May 8, 1951; 1901 GCT; 26°05.5'N, 118°26.5'W; sounding, 2100 fm; wind, 360°, force 3; weather, cloudy; sea, very rough; wire angle, 22°.

0	18.19	33.72	5.03	0.47	0	18.19	33.72	5.03	0.47	24.26	366	0.00
10	18.04	33.68	5.06	0.46	10	18.04	33.68	5.06	0.46	24.27	366	0.04
24	18.02	33.73	5.18	0.46	20	18.02	33.73	5.16	0.46	24.32	362	0.07
51	17.39	33.71E	4.97	0.46	30	18.01	33.73	5.16	0.46	24.32	363	0.11
74	16.23	33.62E	5.32	0.51	50	17.95	33.71	4.97	0.46	24.32	363	0.18
100	13.74	33.51E	4.93	0.64	75	16.18	33.61	5.32	0.51	24.66	331	0.27
147	10.74	33.77E	3.58	1.55	100	13.74	33.51	4.93	0.64	25.11	289	0.35
196	9.30	33.96E	3.04	1.93	150	10.63	33.78	3.53	1.58	25.91	213	0.47
290	8.50	34.31E	1.23	2.64	200	9.24	33.98	3.00	1.96	26.30	177	0.57
390	7.74	34.41E	0.54	3.18	250	8.79	34.21	2.00	2.32	26.55	154	0.66
485	6.84	34.42E	0.32	3.17	300	8.43	34.33	1.12	2.71	26.70	140	0.73
583	6.02	34.45E	0.33	3.22	400	7.63	34.41	0.52	3.18	26.88	124	0.86
780	4.88	34.43E	0.39	3.26	500	6.71	34.42	0.32	3.18	27.02	112	0.98
979	4.16	34.52E	0.55	3.30	600	5.91	34.45	0.34	3.22	27.15	100	1.09
1180	3.60	34.56E	0.77	-	700	5.31	34.44	0.35	3.24	27.22	95	1.19
					800	4.79	34.43	0.40	3.27	27.27	90	1.28
					1000	4.11	34.53	0.57	(3.30)	27.42	76	1.45

120.100 HORIZON; May 8, 1951; 1246 GCT; 25°48'N, 119°07'W; sounding, 2200 fm; wind, 360°, force 5; weather, cloudy; sea, very rough; wire angle, 20°.

0	18.20	33.77E	4.73	0.48	0	18.20	33.77	4.73	0.48	24.30	363	0.00
9	18.18	33.68	4.35	0.46	10	18.18	33.68	4.35	0.46	24.24	370	0.04
24	18.16	33.73E	4.47	0.48	20	18.17	33.72	4.43	0.47	24.27	367	0.07
52	17.54	33.75E	4.58	0.46	30	18.15	33.74	4.51	0.48	24.29	365	0.11
75	17.41	33.86E	4.65	0.48	50	17.63	33.75	4.57	0.47	24.42	353	0.18
102	14.88	33.66E	4.62	0.54	75	17.41	33.86	4.65	0.48	24.56	341	0.27
152	11.57	33.70E	3.62	1.35	100	15.75	33.66	4.63	0.52	24.79	319	0.35
202	9.57	33.95E	3.10	1.82	150	11.63	33.70	3.66	1.31	25.67	236	0.49
302	8.46	34.36E	0.99	2.73	200	9.63	33.94	3.14	1.80	26.21	186	0.60
408	7.20	34.40E	0.47	3.11	250	8.97	34.21	2.33	2.33	26.52	157	0.69
507	6.23	34.41E	0.46	3.26	300	8.48	34.36	1.04	2.72	26.72	139	0.76
607	5.70	34.47E	0.36	-	400	7.29	34.40	0.48	3.09	26.93	120	0.89
803	4.71	34.52E	0.43	3.32	500	6.30	34.41	0.46	3.26	27.07	107	1.00
1001	4.00	34.47E	0.59	3.28	600	5.73	34.46	0.37	(3.30)	27.18	97	1.11
1195	3.55	34.58E	0.92	3.30	700	5.20	34.51	0.39	(3.32)	27.28	88	1.20
					800	4.73	34.52	0.43	(3.32)	27.35	82	1.29
					1000	4.01	34.47	0.59	3.28	27.38	79	1.45

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

HORIZON; May 8, 1951; 0429, 0625 GCT; 25°31.5'N, 119°45'W; sounding, 2050 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 07°, 14°. 120.110

0	18.50	33.72	4.06	0.44	0	18.50	33.72	4.06	0.44	24.19	374	0.00
10	18.48	33.71	4.21	0.40	10	18.48	33.71	4.21	0.40	24.19	374	0.04
25	18.54	33.73	3.66	0.42	20	18.50	33.73	4.20	0.40	24.20	374	0.08
50	17.45	33.64	4.13	0.40	30	18.55	33.73	4.18	0.42	24.18	375	0.11
74	16.82	33.69	4.22	0.44	50	17.45	33.64	4.13	0.40	24.38	357	0.19
98	13.94	33.19	4.09	0.58	75	16.82	33.69	4.22	0.44	24.57	340	0.27
151	10.58	33.31	3.12	1.32	100	13.75	33.19	4.08	0.60	24.86	312	0.36
198	9.67	33.96	2.08	1.94	150	10.60	33.30	3.17	1.30	25.54	248	0.50
293	7.90	33.97a)	1.36	2.36	200	9.63	33.96	2.04	1.95	26.22	184	0.60
392	6.85	34.09a)	0.77	-	250	8.68	33.96	1.60	2.20	26.38	170	0.69
486	6.38	34.25	0.36	3.04	300	7.79	33.97	1.32	2.39	26.52	157	0.78
586	5.65	34.34	0.33	-	400	6.80	34.10	0.73	2.85	26.76	135	0.92
783	4.72	34.42	0.41	3.16	500	6.29	34.29	0.34	3.04	26.98	116	1.05
977	4.11	34.45	0.44	-	600	5.60	34.43	0.30	3.06	27.17	98	1.16
1180	3.58	34.54	0.60	3.10	700	5.15	34.44	0.36	3.10	27.24	92	1.25
					800	4.65	34.42	0.42	3.16	27.28	89	1.34
621b)	5.56	34.52E	0.24	3.06	1000	4.06	34.51	0.45	3.05	27.41	77	1.51
1033	3.98	34.57E	0.62	3.04	1200	3.52	34.55	0.67	3.04	27.50	69	1.66
1237	3.41	34.56E	0.79	2.96	1500	2.84	34.56	1.16	2.96	27.57	62	1.86
1547	2.75	34.56	1.26	2.93	2000	2.12	34.61	1.72	2.70	27.67	52	2.15
1803	2.34	34.62E	1.70c)	2.74	2500	1.78	34.62	2.42	2.60	27.70	49	2.41
2066	2.05	34.61	1.73	2.68	3000	1.64	34.65	2.49	2.54	27.74	47	2.65
2320	1.88	34.61	2.24	-								
2583	1.74	34.63	2.45	2.58								
2877	1.65	34.65	2.47	2.53								
3226	1.60	34.65	2.51	2.57								

HORIZON; May 11, 1951; 2016 GCT; 27°18.5'N, 114°51.5'W; sounding, 270 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°. 123.40

0	14.64	33.73E	6.11	0.62	0	14.64	33.73	6.11	0.62	25.09	288	0.00
10	13.72	33.66	6.05	0.76	10	13.72	33.66	6.05	0.76	25.23	275	0.03
25	12.64	33.84E	5.64	-	20	12.89	33.80	5.81	0.91	25.50	249	0.05
50	10.65	33.86E	3.16	1.86	30	12.22	33.85	5.38	1.14	25.67	233	0.08
74	10.20	33.96E	2.76	2.01	50	10.65	33.86	3.16	1.86	25.97	205	0.12
99	10.19	34.25E	1.72	2.42	75	10.20	33.97	2.74	2.01	26.13	190	0.17
152	10.56	34.51E	0.79	2.74	100	10.20	34.25	1.71	2.42	26.35	170	0.22
200	10.28	34.61E	0.30	2.92	150	10.55	34.50	0.83	2.73	26.49	159	0.30
248	9.85	34.58E	0.35	2.98	200	10.28	34.61	0.30	2.92	26.62	147	0.38
295	9.54	-	0.28	2.98	250	9.84	34.58	0.35	2.98	26.67	143	0.45
347	8.93	34.53E	0.32	3.04	300	9.48	34.61	0.29	2.98	26.75	136	0.52
394	8.20	34.54E	0.25	-	400	8.15	34.53	0.25	3.09	26.90	123	0.65
442	7.78	34.49E	0.26	3.12								

a) Salinity samples at 293 and 392 meters appear to have been reversed; they are assumed to be listed in correct order.
b) Overlapping casts; reconciliation of property curves when necessary.
c) Mean value of 1.66 and 1.74 ml/L.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5} cm^3/g	ΔD dyn m
123.50	HORIZON; May 12, 1951; 0146 GCT; 26°58'N, 115°31'W; sounding, 1850 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 04°.											
0	17.02	33.68E	5.34	0.56	0	17.02	33.68	5.34	0.56	24.52	343	0.00
10	16.96	33.51	5.22	-	10	16.96	33.51	5.22	0.56	24.40	354	0.04
25	16.89	33.53E	5.22	0.56	20	16.92	33.53	5.22	0.56	24.43	352	0.07
55	14.50	33.46E	5.30	0.58	30	16.88	33.52	5.27	0.57	24.43	352	0.11
80	11.68	33.42E	4.11	1.22	50	15.35	33.47	5.30	0.58	24.74	323	0.17
111	10.98	33.73E	3.57	-	75	12.00	33.42	4.30	1.12	25.38	262	0.25
164	9.72	34.16E	2.19	-	100	11.18	33.53	3.74		25.62	240	0.31
217	9.82	34.60E	0.91	2.64	150	9.86	34.06	2.61		26.26	180	0.42
323	8.82	34.54E	0.35	-	200	9.83	34.52	1.28		26.62	146	0.50
433	7.60	34.49E	0.28	-	250	9.57	34.60	0.61		26.73	137	0.57
540	6.55	34.47E	0.24	3.26	300	9.06	34.56	0.40		26.78	133	0.64
645	5.84	34.51E	0.28	3.32	400	7.98	34.50	0.30		26.90	123	0.77
851	4.73	34.52E	0.35	3.41	500	6.93	34.47	0.26		27.03	111	0.88
1060	3.89	-	0.67	3.32	600	6.13	34.49	0.25	3.29	27.15	100	0.99
1263	3.41	34.58E	0.80	3.26	700	5.54	34.52	0.28	3.36	27.25	92	1.09
					800	5.02	34.52	0.32	3.41	27.31	86	1.18
					1000	4.12	34.57	0.58	3.35	27.45	73	1.34
123.60	HORIZON; May 12, 1951; 0747 GCT; 26°40.5'N, 116°10.5'W; sounding, 2200 fm; wind, 320°, force 6; weather, partly cloudy; sea, high; wire angle, 04°.											
0	17.14	33.68E	5.43	0.50	0	17.14	33.68	5.43	0.50	24.49	346	0.00
10	17.13	33.46	5.35	0.54	10	17.13	33.46	5.35	0.54	24.32	361	0.04
31	16.80	33.51E	5.31	0.52	20	17.04	33.49	5.32	0.53	24.37	358	0.07
60	13.88	33.34E	5.62	0.59	30	16.80	33.51	5.31	0.52	24.44	351	0.11
91	11.74	33.57E	4.44	1.22	50	14.90	33.37	5.60	0.54	24.76	321	0.17
120	10.58	33.81E	3.28	1.73	75	12.70	33.38	5.52	0.79	25.22	278	0.25
178	9.62	34.13E	2.32	2.18	100	11.34	33.66	3.83	1.43	25.69	233	0.31
234	9.15	34.29E	1.54	-	150	10.03	34.00	2.73	2.01	26.19	187	0.42
348	7.77	34.36E	0.77	-	200	9.42	34.21	2.00		26.45	163	0.51
455	6.84	34.36	0.41	-	250	9.03	34.30	1.40		26.58	151	0.59
568	6.24	34.34	0.24	3.25	300	8.49	34.34	1.03		26.70	140	0.66
676	5.26	34.36	0.37	3.28	400	7.28	34.37	0.56		26.90	122	0.79
899	4.35	34.43	0.50	3.36	500	6.58	34.35	0.30		26.98	115	0.91
1117	3.70	34.52	0.70	3.30	600	6.01	34.34	0.27	3.27	27.05	110	1.03
1327	3.33	34.54	0.88	-	700	5.12	34.37	0.38	3.28	27.18	97	1.13
					800	4.68	34.40	0.45	3.33	27.26	91	1.23
					1000	4.05	34.48	0.58	3.34	27.39	79	1.40
127.40	HORIZON; May 13, 1951; 0243 GCT; 26°37.5'N, 114°27'W; sounding, 2100 fm; wind, 340°, force 7; weather, clear; sea, high; wire angle, 05°.											
0	14.54	33.60E	3.38	0.50	0	14.54			0.50			
10	14.51	33.47	4.10	0.50	10	14.51			0.50			
25	14.52	33.17E	5.29	0.51	20	14.52			0.51			
51	13.13	33.57E	5.73	0.83	30	14.51			0.53			
75	11.04	33.57E	5.88	1.29	50	13.30			0.82			
100	10.73	33.71E	5.76	1.54	75	11.04			1.29			
153	9.68	34.11E	2.36	2.06	100	10.73			1.54			
201	9.34	34.45E	1.51	2.40	150	9.72			2.03			
296	8.91	34.51E	0.43	2.74	200	9.35		1.53	2.40			
398	7.88	34.58E	0.35	2.85	250	9.12		0.77	2.62			
494	6.80	34.38E	0.30	-	300	8.89		0.43	2.74			
592	6.30	34.51E	0.17	3.04	400	7.86		0.35	2.85			
791	4.99	34.36E	0.38	3.09	500	6.77		0.28	2.98			
987	4.21	34.56E	0.47	3.12	600	6.24		0.18	3.04			
1190	3.64	34.60E	0.71	3.00	700	5.54		0.27	3.06			
					800	4.94		0.38	3.10			
					1000	4.16		0.48	3.12			

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^5 cm^3/g$	ΔD dyn m
HORIZON; May 12, 1951; 2115 GCT; 26°22'N, 115°08'W; sounding, 2100 fm; wind, 320°, force 6; weather, partly cloudy; sea, very high; wire angle, 14°.												127.50
0	16.68	33.42	5.12	0.46	0	16.68	33.42	5.12	0.46	24.40	354	0.00
9	16.64	33.42	5.29	-	10	16.63	33.42	5.29	0.52	24.41	353	0.04
24	16.60	33.38	5.09	0.52	20	16.61	33.39	5.12	0.52	24.39	355	0.07
52	15.71	33.31	5.24	0.52	30	16.56	33.36	5.12	0.52	24.38	357	0.11
76	13.53	33.26	5.34	0.67	50	15.80	33.32	5.23	0.52	24.52	344	0.18
100	12.54	33.30	4.89	0.93	75	13.75	33.26	5.34	0.67	24.92	307	0.26
157	10.46	33.91	2.31	2.05	100	12.54	33.30	4.89	0.93	25.19	281	0.33
207	9.41	34.07	1.98	2.26	150	10.67	33.81	2.37	1.99	25.93	212	0.46
307	7.90	34.23	1.10	-	200	9.53	34.06	2.04	2.24	26.32	175	0.55
412	6.61	34.22	0.66	2.94	250	8.73	34.16	1.48	(2.39)	26.52	157	0.64
511	6.39	34.33	0.31	3.16	300	8.01	34.22	1.14	(2.56)	26.68	142	0.71
611	5.84	34.37	0.25	3.19	400	6.73	34.22	0.70	(2.90)	26.86	126	0.85
813	4.79	34.54E	0.34	3.27	500	6.40	34.32	0.34	3.15	26.98	115	0.97
1023	4.06	34.56E	0.54	-	600	5.93	34.37	0.25	3.18	27.08	107	1.08
1228	3.52	-	-	-	700	5.34	34.44	0.27	3.23	27.21	95	1.18
					800	4.85	34.53	0.33	3.27	27.34	83	1.27
					1000	4.12	34.56	0.52		27.44	74	1.43
HORIZON; May 12, 1951; 1410 GCT; 26°11'N, 115°51'W; sounding, 2100 fm; wind, 330°, force 6; weather, partly cloudy; sea, very rough; wire angle, 07°.												127.60
0	18.16	33.71	5.03	-	0	18.16	33.71	5.03		24.27	367	0.00
10	18.15	33.71	5.10	0.51	10	18.15	33.71	5.10	0.51	24.27	367	0.04
25	18.16	33.75	5.26	0.54	20	18.15	33.74	5.20	0.52	24.29	365	0.07
51	18.14	33.71	5.12	0.53	30	18.15	33.75	5.25	0.54	24.30	364	0.11
75	17.08	33.71	5.19	0.54	50	18.14	33.71	5.13	0.53	24.27	368	0.18
99	13.89	33.50	5.12	-	75	17.08	33.71	5.19	0.54	24.53	344	0.27
153	10.26	33.71	3.98	1.52	100	13.89	33.50	5.11	0.94	25.07	292	0.35
201	9.68	34.10	2.15	2.28	150	10.33	33.70	4.12	1.47	25.90	214	0.48
298	9.19	34.38	0.84	-	200	9.69	34.09	2.18	2.27	26.31	176	0.58
399	8.09	34.40	0.44	3.00	250	9.40	34.32	1.19	2.52	26.54	155	0.66
493	6.88	34.36	0.37	3.08	300	9.18	34.38	0.82	2.73	26.62	148	0.74
592	6.06	34.38	0.28	-	400	8.08	34.40	0.44	(3.00)	26.81	132	0.88
788	4.85	34.43	0.37	3.24	500	6.84	34.36	0.36	(3.08)	26.96	118	1.01
983	4.12	34.40	0.57	3.24	600	5.99	34.38	0.28	(3.14)	27.08	107	1.12
1187	3.62	34.47	0.75	3.27	700	5.35	34.41	0.30	(3.21)	27.19	97	1.22
					800	4.80	34.43	0.38	3.24	27.27	90	1.32
					1000	4.07	34.40	0.58	3.24	27.32	85	1.49
HORIZON; May 13, 1951; 0810 GCT; 26°19.5'N, 113°50.5'W; sounding, 300 fm; wind, 340°, force 7; weather, partly cloudy; sea, high; wire angle, 00°.												130.35
0	14.82	33.49E	5.50	0.62	0	14.82	33.49	5.50	0.62	24.86	309	0.00
10	14.78	33.40	5.41	0.61	10	14.78	33.40	5.41	0.61	24.81	315	0.03
25	14.74	33.46E	5.55	0.66	20	14.76	33.44	5.52	0.64	24.84	312	0.06
50	12.28	33.46E	4.59	1.09	30	14.60	33.46	5.53	0.69	24.89	308	0.09
74	11.31	33.69E	3.74	1.61	50	12.28	33.46	4.59	1.09	25.36	264	0.15
98	10.66	33.91E	3.20	1.81	75	11.30	33.69	3.72	1.62	25.72	230	0.21
151	10.49	34.33E	1.42	2.51	100	10.64	33.93	3.16	1.83	26.03	201	0.27
198	10.22	34.58E	0.50	2.82	150	10.49	34.32	1.48	2.50	26.36	171	0.36
246	9.87	34.63E	0.19	3.00	200	10.20	34.58	0.48	2.84	26.61	148	0.44
293	9.32	34.56E	0.29	2.94	250	9.83	34.63	0.19	3.01	26.71	139	0.51
347	9.04	34.56E	0.21	3.08	300	9.28	34.56	0.29	2.94	26.75	137	0.58
396	8.38	34.56E	0.21a)	3.10	400	8.36	34.56	0.20	3.10	26.89	124	0.72
448	8.15	-	0.20	3.12	500	(7.84)	(34.52)	(0.23)	(3.11)	(26.94)	(121)	(0.84)
493	7.86	34.52E	0.23	3.11								

a) Alternate value, 0.32 ml/L, not used in interpolation.

S10
CCOFI
5105

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m

130.40 HORIZON; May 13, 1951; 1146 GCT; 26°12'N, 114°12'W; sounding, 1800 fm; wind, 340°, force 7; weather, partly cloudy; sea, missing; wire angle, 08°.

0	15.67		4.70	0.60	0	15.67		4.70	0.60			
10	15.64		4.88	0.58	10	15.64		4.88	0.58			
25	15.65		4.90	0.58	20	15.64		4.91	0.58			
49	15.46		4.97	0.60	30	15.63		4.92	0.58			
74	12.98		4.59	0.78	50	15.45		4.96	0.61			
99	11.61		3.85	1.38	75	12.98		4.57	0.80			
152	10.44		2.37	2.12	100	11.60		3.82	1.41			
199	9.84		1.22	2.48	150	10.50		2.42	2.10			
290	9.02		0.35	2.91	200	9.84		1.20	2.49			
387	7.36		0.56	3.01	250	9.40		0.47	2.78			
478	6.71		0.38	3.25	300	8.84		0.36	2.92			
574	6.24		0.27	3.31	400	7.26		0.54	3.04			
764	5.18		0.29	3.37	500	6.59		0.34	3.27			
957	4.38		0.42	3.41	600	6.08		0.27	3.32			
1161	3.76		0.69	3.40	700	5.53		0.27	3.35			
					800	5.02		0.30	3.38			
					1000	4.23		0.46	3.42			

130.50 HORIZON; May 13, 1951; 1741 GCT; 25°57.5'N, 114°51.5'W; sounding, 2100 fm; wind, 340°, force 6; weather, cloudy; sea, very high; wire angle, 06°.

0	16.71	33.51E	5.33	0.56	0	16.70	33.51	5.33	0.56	24.46	348	0.00
10	16.66	33.46E	5.41	0.52	10	16.66	33.46	5.41	0.52	24.43	351	0.04
25	16.11	33.44E	5.47	0.57	20	16.28	33.45	5.45	0.56	24.51	344	0.07
54	15.76	33.44E	5.59	0.58	30	16.02	33.44	5.50	0.58	24.56	339	0.10
79	15.02	33.48E	5.67	0.60	50	15.81	33.44	5.57	0.58	24.61	335	0.17
109	12.36	33.48E	4.85	1.02	75	15.30	33.47	5.66	0.59	24.75	323	0.25
161	10.42	33.91E	2.98	1.92	100	12.85	33.48	5.28	0.84	25.27	274	0.33
214	9.70	34.23E	1.84	-	150	10.77	33.83	3.28	1.76	25.93	212	0.45
317	9.27	34.51E	0.43	2.96	200	9.87	34.16	2.14	(2.43)	26.34	174	0.55
428	7.30	34.43E	0.46	3.00	250	9.50	34.38	1.20	(2.81)	26.57	152	0.63
532	6.07	34.40E	0.35	3.20	300	9.33	34.50	0.55	(2.94)	26.69	142	0.71
636	5.44	34.47E	0.30	3.28	400	7.79	34.46	0.45	2.98	26.90	123	0.84
842	4.67	34.54E	0.39	3.33	500	6.39	34.40	0.37	3.13	27.05	109	0.96
1050	3.90	34.58E	0.62	3.38	600	5.64	34.44	0.31	3.26	27.18	98	1.06
1251	3.48	34.54	0.84	3.36	700	5.17	34.52	0.30	3.30	27.30	87	1.15
					800	4.80	34.54	0.36	3.32	27.36	82	1.24
					1000	4.07	34.57	0.55	3.37	27.46	73	1.39

130.60 HORIZON; May 13, 1951; 2321 GCT; 25°29'N, 115°22.5'W; sounding, 1800 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 00°.

0	18.26	33.30E	5.20	0.50	0	18.26	33.30	5.20	0.50	23.93	399	0.00
10	18.24	33.46	5.00	0.50	10	18.24	33.46	5.00	0.50	24.06	387	0.04
25	18.26	33.30E	4.80	0.46	20	18.25	33.33	4.85	0.48	23.95	397	0.08
50	18.20	33.84E	5.19	0.50	30	18.25	33.31	4.83	0.46	23.94	399	0.12
75	17.98	33.80E	5.20	0.50	50	18.20	33.84	5.19	0.50	24.36	360	0.19
100	15.75	33.51E	5.02	0.58	75	17.98	33.80	5.20	0.50	24.38	358	0.29
155	11.34	34.00E	3.41	1.52	100	15.75	33.51	5.02	0.58	24.68	330	0.37
203	11.24	34.36E	1.36	2.51	150	11.39	33.96	3.74	1.37	25.92	213	0.51
300	9.99	34.58E	0.57	2.84	200	11.25	34.34	1.43	2.45	26.24	184	0.61
399	8.32	34.47E	0.49	3.04	250	10.87	34.54	0.80	2.73	26.46	164	0.70
495	7.10	34.43E	0.41	3.22	300	9.99	34.58	0.57	2.84	26.64	147	0.77
595	5.85	-	0.35	3.23	400	8.32	34.47	0.49	3.04	26.83	130	0.91
789	4.84	34.51E	0.42	3.32	500	7.06	(34.43)	0.41	3.22	(26.98)	(116)	(1.04)
					600	5.82		0.35	3.23			
					700	5.27		0.38	3.25			
					800	(4.81)						

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

HORIZON; May 14, 1951; 0506 GCT; 25°09'N, 116°02'W; sounding, 1950 fm; wind, 340°, force 5; weather, cloudy; sea, high; wire angle, 02°. 130.70

0	18.60	-	4.81	0.47	0	18.60	(33.93)	4.81	0.47	(24.32)	(360)	(0.00)
10	18.58	33.91	4.83	0.50	10	18.58	33.91	4.83	0.50	24.31	362	0.03
25	18.60	34.00E	4.68	0.48	20	18.60	33.98	4.74	0.49	24.36	358	0.07
53	18.56	33.95E	5.07	0.48	30	18.60	34.00	4.72	0.48	24.37	356	0.10
77	17.39	-	5.26	0.53	50	18.57	33.96	5.05	0.48	24.35	359	0.18
106	13.97	33.69E	4.67	0.77	75	17.98	33.83	5.26	0.53	24.40	356	0.27
156	11.98	34.11E	2.32	-	100	14.25	33.69	4.84	0.71	25.14	285	0.35
207	11.35	34.52E	0.91	-	150	12.13	34.01	2.60		25.81	222	0.47
308	9.94	34.58E	0.35	2.84	200	11.41	34.50	1.03		26.33	174	0.57
420	8.19	34.49E	0.24	2.94	250	10.84	34.56	0.57		26.48	161	0.66
524	6.77	-	0.31	3.12	300	10.06	34.58	0.38	(2.83)	26.63	147	0.74
					400	8.47	34.51	0.25	2.92	26.83	129	0.88
					500	7.08		0.30	3.08			

HORIZON; May 14, 1951; 1022 GCT; 24°48'N, 116°41.5'W; sounding, 2150 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 00°. 130.80

0	19.08	34.16E	5.10	-	0	19.08	34.16	5.10		24.37	355	0.00
10	19.06	34.10	5.11	0.50	10	19.06	34.10	5.11	0.50	24.33	360	0.04
25	19.09	34.20E	4.85	0.52	20	19.07	34.18	4.85	0.51	24.39	354	0.07
50	19.10	34.18E	5.04	0.50	30	19.10	34.20	4.87	0.52	24.40	354	0.11
75	17.18	33.95E	5.16	0.56	50	19.10	34.18	5.04	0.50	24.38	356	0.18
100	14.84	33.76E	5.11	0.71	75	17.18	33.95	5.16	0.56	24.69	328	0.26
154	12.08	34.25E	1.77	2.26	100	14.84	33.76	5.11	0.71	25.07	292	0.34
204	11.97	34.76E	0.68	2.72	150	12.16	34.21	1.92	2.17	25.96	208	0.47
314	9.83	34.61E	0.43	2.86	200	11.98	34.75	0.73	2.70	26.41	166	0.56
403	8.26	34.42E	0.35	3.05	250	11.48	34.72	0.52	2.81	26.48	161	0.65
500	7.42	34.56E	0.19	3.16	300	10.25	34.64	0.45	2.86	26.64	146	0.72
601	6.30	34.51E	0.22	-	400	8.31	34.42	0.36	3.04	26.79	133	0.86
796	4.98	34.51E	0.38	3.33	500	7.42	34.56	0.19	3.16	27.03	111	0.99
					600	6.33	34.51	0.22	3.22	27.14	101	1.10
					700	5.49	34.51	0.28	3.28	27.25	91	1.19
					800	(4.95)	(34.51)	(0.39)	(3.33)	(27.31)	(85)	(1.28)

HORIZON; May 14, 1951; 1224 GCT;[a] 24°48'N, 116°41.5'W; sounding, 2150 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 05°. 130.80

689	5.54
714	5.44
738	5.32
761	5.21
785	5.04
809	4.94
834	4.84
857	4.72
882	4.62
907	4.53
931	4.43
955	4.34
981	4.24
1006	4.20

a) Test cast.

SIO
CCOFI
5105

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ $10^{-5}cm^3/g$	ΔD dyn m
133.30	HORIZON; May 15, 1951; 1600 GCT; 25°54.5'N, 113°10'W; sounding, 119 fm; wind, 340°, force 1; weather, clear; sea, moderate; wire angle, 12°.											
0	14.20	33.80	5.52	0.57	0	14.20	33.80	5.52	0.57	25.24	274	0.00
10	14.26	33.86	5.32	0.56	10	14.26	33.86	5.32	0.56	25.27	271	0.03
24	13.78	33.77	4.88	0.68	20	13.92	33.83	5.03	0.59	25.32	267	0.05
48	11.96	33.58	3.48	1.32	30	13.25	33.69	4.58	0.73	25.35	264	0.08
72	11.11	33.93	2.07	2.05	50	11.90	33.58	3.38	1.37	25.53	248	0.13
96	11.14	34.23	1.35	2.33	75	11.11	33.96	1.96	2.09	25.97	206	0.19
149	11.24	34.56	0.23	2.85	100	11.15	34.26	1.28	2.40	26.19	186	0.24
198	10.70	34.67	0.26	2.93	150	11.24	34.56	0.23	2.85	26.41	166	0.33
					200	(10.70)	(34.67)	(0.26)	(2.93)	(26.59)	(150)	(0.41)
133.40	HORIZON; May 15, 1951; 0949 GCT; 25°32'N, 113°47.5'W; sounding, 1200 fm; wind, 340°, force 5; weather, clear; sea, high; wire angle, 02°.											
0	16.03	33.51E	5.14	-	0	16.03	33.51	5.14		24.62	333	0.00
10	16.01	33.46E	5.21	0.52	10	16.01	33.46	5.21	0.52	24.58	337	0.03
25	15.98	33.49E	5.33	0.53	20	16.00	33.48	5.28	0.53	24.60	335	0.07
55	14.87	33.53E	5.40	0.58	30	15.95	33.49	5.35	0.53	24.62	334	0.10
80	12.68	33.64E	4.97	1.14	50	15.66	33.52	5.40	0.56	24.71	326	0.17
109	11.70	33.96E	2.38	1.86	75	13.00	33.61	5.20	0.89	25.34	266	0.24
162	10.40	34.29E	1.60	2.32	100	11.64	33.83	2.67	1.69	25.77	226	0.30
216	9.84	34.43E	0.84	2.60	150	10.77	34.23	1.79	2.23	26.24	182	0.41
322	9.15	34.52E	0.34	-	200	9.98	34.40	1.03	2.52	26.51	158	0.49
431	7.88	34.49	0.25	-	250	9.61	34.48	0.59		26.63	147	0.57
536	6.84	34.42	0.22	2.90	300	9.29	34.52	0.40		26.72	140	0.64
642	6.03	34.46	0.22	-	400	8.28	34.50	0.25		26.86	127	0.78
847	4.85	34.47	0.34	-	500	7.18	34.44	0.23		26.97	117	0.90
1058	4.06	34.47	0.54	3.24	600	6.34	34.44	0.22		27.09	107	1.01
1261	3.56	34.52	0.73	-	700	5.67	34.47	0.23		27.20	97	1.11
					800	5.09	34.48	0.30		27.27	90	1.21
					1000	4.25	34.47	0.49		27.36	82	1.38
133.50	HORIZON; May 15, 1951; 0400 GCT; 25°10.5'N, 114°21.5'W; sounding, 1840 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 05°.											
0	17.35	-	4.41	0.50	0	17.35	(33.59)	4.41	0.50	(24.14)	(357)	(0.00)
10	17.32	33.59	4.37	0.50	10	17.32	33.59	4.37	0.50	24.38	356	0.04
25	17.33	33.64E	4.33	0.51	20	17.32	33.63	4.33	0.51	24.41	354	0.07
50	17.27	-	4.50	0.49	30	17.32	33.64	4.35	0.51	24.42	353	0.11
75	16.55	33.80E	4.60	0.49	50	17.27	33.72	4.50	0.49	24.48	347	0.18
99	14.15	33.64E	4.40	0.58	75	16.55	33.80	4.60	0.49	24.72	326	0.26
152	11.27	33.89E	2.86	1.64	100	14.00	33.64	4.40	0.59	25.16	284	0.34
201	9.94	34.18E	1.98	2.10	150	11.33	33.88	2.93	1.60	25.86	218	0.46
295	8.76	33.26E	1.02	-	200	9.98	34.18	2.03	2.08	26.34	174	0.56
394	7.83	34.47E	0.51	2.88	250	9.28	34.31	1.40	2.35	26.55	154	0.64
487	7.32	34.51E	0.19	-	300	8.72	34.40	1.00	2.57	26.71	140	0.73
587	6.14	34.56E	0.22	3.10	400	7.80	34.47	0.51	2.89	26.91	122	0.85
780	4.77	34.51E	0.33	3.20	500	7.23	34.51	0.20	3.00	27.02	113	0.97
970	4.08	34.54E	0.48	3.20	600	6.03	34.56	0.23	3.11	27.22	94	1.07
1172	3.60	34.51E	0.75	3.12	700	5.30	34.52	0.28	3.18	27.28	88	1.17
					800	4.69	34.52	0.35	3.20	27.35	82	1.25
					1000	4.00	34.54	0.53	3.19	27.44	74	1.41

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

HORIZON; May 14, 1951; 2211 GCT; 24°54.5'N, 115°01'W; sounding, 2150 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 07°. 133.60

0	18.41	-	5.14	0.54	0	18.41	(33.82)	5.14	0.54	(24.29)	(364)	(0.00)
10	18.36	33.82	5.15	0.56	10	18.36	33.82	5.15	0.56	24.30	363	0.04
25	18.26	33.89E	5.20	0.52	20	18.28	33.86	5.17	0.54	24.35	359	0.07
50	18.26	33.96E	5.23	0.54	30	18.26	33.92	5.19	0.52	24.40	354	0.11
74	18.08	33.90E	5.20	-	50	18.26	33.96	5.23	0.54	24.43	352	0.18
99	16.65	-	-	-	75	18.07	33.90	5.20	(0.52)	24.43	353	0.27
151	12.50	33.75E	4.20	1.22	100	16.65	33.83	5.11	(0.59)	24.72	326	0.35
198	11.48	34.40E	1.21	2.48	150	12.58	33.75	4.20	(1.20)	25.53	250	0.50
291	9.82	34.52E	0.68	-	200	11.42	34.40	1.17	2.49	26.25	182	0.61
389	8.43	34.47E	0.48	3.06	250	10.52	34.50	0.83	2.67	26.49	160	0.69
482	7.38	34.38E	0.38	3.14	300	9.67	34.52	0.64	2.80	26.65	145	0.77
581	6.27	34.42E	0.32	3.21	400	8.29	34.46	0.46	3.07	26.83	130	0.91
776	5.14	34.43E	0.36	-	500	7.17	34.38	0.36	3.15	26.93	121	1.04
972	4.36	-	0.70u	3.29	600	6.15	34.43	0.32	(3.23)	27.10	105	1.15
1176	3.75	34.56E	0.47	-	700	5.55	34.42	0.34	(3.26)	27.17	99	1.25
					800	5.02	(34.44)		(3.28)	(27.25)	(91)	(1.35)
					1000	4.26			(3.28)			

HORIZON; May 15, 1951; 2215 GCT; 25°10'N, 113°04.5'W; sounding, 750 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 27°. 137.35

0	16.26	33.52	5.52	0.52	0	16.26	33.52	5.52	0.52	24.57	337	0.00
8	16.16	33.64	5.48	0.53	10	16.14	33.64	5.47	0.53	24.69	326	0.03
22	15.91	33.57	5.47	0.54	20	15.95	33.57	5.47	0.54	24.68	328	0.07
48	13.86	33.60	5.08	0.81	30	15.69	33.57	5.42	0.59	24.74	322	0.10
70	12.32	33.71	3.73	1.36	50	13.67	33.60	4.95	0.83	25.19	280	0.16
96	11.31	33.95	2.33	-	75	11.96	33.76	3.41	1.50	25.65	236	0.22
144	11.52	34.56	0.47	2.69	100	11.31	33.99	1.94	2.09	25.95	208	0.28
191	11.01	34.58	0.30	-	150	11.51	34.56	0.45	(2.70)	26.36	171	0.38
285	-	34.57	0.18	2.92	200	(10.91)	34.58	0.29	(2.75)	(26.48)	(160)	(0.46)
384	8.64	34.52	0.15	3.01	250	(10.25)	34.57	0.21	(2.84)	(26.59)	(151)	(0.54)
480	7.52	34.43	0.16	3.15	300	(9.63)	34.57	0.17	2.94	(26.70)	(142)	(0.61)
576	6.66	34.47	0.20	3.20	400	8.48	34.50	0.15	3.03	26.83	130	(0.75)
774	5.43	34.43	0.22	3.33	500	7.34	34.43	0.16	3.16	26.94	120	(0.87)
979	4.46	34.49	0.39	-	600	6.48	34.47	0.20	3.21	27.09	107	(0.99)
1182	3.82	34.52	0.62	3.36	700	5.85	34.45	0.20	3.28	27.16	101	(1.09)
					800	5.29	34.43	0.25	3.34	27.21	96	(1.19)
					1000	4.37	34.49	0.41	3.36	27.36	82	(1.37)

HORIZON; May 16, 1951; 0204 GCT; 25°00'N, 113°23'W; sounding, 1650 fm; wind, 330°, force 4; weather, cloudy; sea, very rough; wire angle, 08°. 137.40

0	16.20	33.62E	4.41	0.56	0	16.20	33.62	4.41	0.56	24.66	328	0.00
10	16.16	33.56	4.79	-	10	16.16	33.56	4.79	0.56	24.62	332	0.03
25	15.86	33.62E	4.77	0.56	20	15.98	33.60	4.78	0.56	24.69	326	0.06
49	14.00	33.66E	4.43	0.73	30	15.79	33.63	4.73	0.58	24.76	320	0.09
75	12.86	33.70E	3.80	1.17	50	13.88	33.66	4.42	0.73	25.19	279	0.15
99	11.93	33.95E	2.59	1.74	75	12.86	33.70	3.80	1.17	25.43	257	0.22
152	10.68	-	1.61	2.32	100	11.93	33.95	2.58	1.74	25.80	222	0.28
200	9.80	34.40E	1.17	-	150	10.74	34.30	1.64	2.31	26.29	176	0.38
294	-	34.61E	0.39	2.82	200	9.80	34.40	1.17		26.53	154	0.47
392	8.14	34.60E	0.28	2.96	250	9.31	34.53	0.65	2.67	26.72	138	0.54
485	7.12	34.56E	0.18	3.21u	300	8.87	34.61	0.38	2.83	26.85	126	0.61
583	6.48	34.45	0.21	3.14	400	8.06	34.59	0.28	2.97	26.96	117	0.73
778	5.25	34.43	0.25	3.28	500	7.02	34.55	0.18		27.08	106	0.84
969	4.38	34.49	0.39	-	600	6.36		0.21	3.15			
1171	3.81	34.60E	0.63	3.20	700	5.71		0.23	3.24			
					800	5.14		0.26	3.28			
					1000	4.29		0.43	3.28			

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ 10^{-5}cm^3/g	ΔD dyn m
137.50	HORIZON; May 16, 1951; 0750 GCT; 24°40'N, 114°02'W; sounding, 2000 fm; wind, 320°, force 5; weather, cloudy; sea, high; wire angle, 02°.											
0	17.28	33.69E	5.49	-	0	17.28	33.69	5.49		24.46	348	0.00
10	17.28	33.56	5.42	0.56	10	17.28	33.56	5.42	0.56	24.36	358	0.04
25	17.27	33.68E	5.63	0.59	20	17.27	33.68	5.60	0.57	24.46	349	0.07
54	17.02	33.64E	5.48	0.62	30	17.25	33.67	5.63	0.60	24.46	349	0.11
78	15.58	33.77E	5.56	0.64	50	17.04	33.64	5.50	0.62	24.48	348	0.18
108	12.70	33.92E	4.40	1.18	75	16.05	33.73	5.55	0.64	24.78	320	0.26
160	10.57	33.98E	2.87	2.01	100	13.28	33.89	4.70	0.92	25.50	252	0.33
214	9.58	34.27E	1.99	2.36	150	10.82	33.96	3.10	1.91	26.02	203	0.45
318	-	34.41E	1.02	2.82	200	9.80	34.18	2.18	2.28	26.36	171	0.54
428	7.06	34.39E	0.46	3.10	250	(9.08)	34.37	1.61	2.54	(26.63)	(146)	(0.62)
533	6.24	34.45E	0.29	-	300	(8.44)	34.41	1.16	2.75	(26.76)	(135)	(0.69)
638	5.80	34.67E	0.22	3.32	400	(7.31)	34.39	0.56	3.04	(26.92)	(121)	(0.82)
845	4.62	34.56E	0.38	3.35	500	6.46	34.42	0.30	3.20	27.06	109	(0.94)
1056	3.84	34.60E	0.65	3.34	600	5.99	34.61	0.24	3.30	27.26	90	(1.04)
1260	3.42	34.60E	0.91	3.33	700	5.41	34.65	0.25	3.34	27.37	80	(1.12)
					800	4.85	34.58	0.32	3.35	27.38	79	(1.20)
					1000	4.03	34.60	0.57	3.34	27.48	69	(1.35)
137.60	HORIZON; May 16, 1951; 1331 GCT; 24°21'N, 114°39.5'W; sounding, 2150 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 09°.											
0	18.30	33.95E	4.12	0.50	0	18.30	33.95	4.12	0.50	24.41	352	0.00
10	18.28	33.87	4.66	0.48	10	18.28	33.87	4.66	0.48	24.35	358	0.03
24	18.30	34.02E	4.67	0.50	20	18.29	34.01	4.65	0.50	24.46	348	0.07
49	18.31	33.89E	4.42	0.50	30	18.30	34.01	4.62	0.50	24.46	349	0.10
73	18.20	33.75E	4.47	-	50	18.31	33.89	4.43	0.50	24.36	358	0.17
98	16.75	33.86E	4.67	0.55	75	17.87	33.75	4.48	0.51	24.36	359	0.26
151	12.88	33.66	4.01	1.00	100	16.62	33.86	4.66	0.56	24.74	323	0.35
198	11.51	34.33	1.67	2.26	150	12.91	33.66	4.01	0.93	25.39	263	0.50
291	10.22	34.61	0.55	2.80	200	11.45	34.34	1.59	2.29	26.19	187	0.61
389	9.10	34.65	0.27	2.99	250	10.73	34.55	0.81	2.66	26.49	160	0.70
481	7.69	34.58	0.23	-	300	10.11	34.62	0.51	2.82	26.65	145	0.77
577	6.92	34.72	0.16	3.30	400	8.94	34.64	0.27	3.01	26.86	127	0.91
767	5.48	34.56	0.28	3.38	500	7.53	34.60	0.22	3.23	27.04	110	1.03
956	4.48	34.70	0.40	3.43	600	6.73		0.16	3.31			
1155	3.83	34.81	0.63	3.43	700	5.94		0.20	3.36			
					800	5.29		0.30	3.39			
					1000	4.31		0.45	3.43			

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 8, 1951; 2302 GCT; 37°37'N, 123°37'W; sounding, 1860 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 00°.

10	12.02	33.32	0	12.2
99	8.66		10	12.02
152	7.96		20	11.3
199	7.46		30	10.6
293	6.54		50	9.3
393	5.80		75	8.8
488	5.39		100	8.7
588	5.25		150	7.99
783	4.51		200	7.45
976	3.88		250	6.96
1179	3.39		300	6.49
			400	5.76
			500	5.37
			600	5.24
			700	4.92
			800	4.44
			1000	3.81

BLACK DOUGLAS; June 9, 1951; 1534 GCT; 36°57'N, 125°04'W; sounding, 2270 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 15°.

10	12.18	33.04	0	12.3
97	8.60		10	12.18
147	7.93		20	12.1
191	7.69		30	12.1
279	6.80		50	11.0
374	6.21		75	8.7
463	5.52		100	8.5
558	5.00		150	7.91
746	4.53		200	7.63
948	3.89		250	7.14
1152	3.36		300	6.64
			400	6.04
			500	5.30
			600	4.88
			700	4.63
			800	4.39
			1000	3.74

BLACK DOUGLAS; June 10, 1951; 0751 GCT; 36°17'N, 126°30'W; sounding, 2560 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 26°.

9	14.02	32.90	0	14.2
89	10.59		10	14.0
136	8.95		20	14.0
178	8.16		30	14.0
258	7.22		50	13.2
340	6.30		75	10.9
421	5.92		100	9.9
508	5.42		150	8.63
683	4.64		200	7.89
867	4.09		250	7.32
1064	3.56		300	6.68
			400	6.00
			500	5.47
			600	4.97
			700	4.58
			800	4.27
			1000	3.74

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

60.60

BLACK DOUGLAS; June 9, 1951; 0730 GCT; 37°17'N, 124°21'W; sounding, 2220 fm; wind, 300°, force 6; weather, overcast; sea, high; wire angle, 00°.

60.70

10	10.87	33.10	0	11.0
98	8.76		10	10.87
152	8.51		20	10.8
199	8.17		30	10.6
292	7.38		50	10.0
391	6.74		75	8.8
484	5.99		100	8.7
582	5.40		150	8.52
776	4.54		200	8.16
968	3.88		250	7.76
1171	3.40		300	7.33
			400	6.69
			500	5.88
			600	5.30
			700	4.84
			800	4.46
			1000	3.78

60.80

BLACK DOUGLAS; June 10, 1951; 0045 GCT; 36°37'N, 125°47'W; sounding, 2500 fm; wind, 340°, force 5; weather, overcast; sea, very rough; wire angle, 12°.

60.90

10	13.28	32.81	0	13.4
95	10.56		10	13.28
144	8.76		20	13.3
188	8.36		30	13.2
277	7.14		50	13.1
372	6.48		75	11.0
463	5.55		100	10.4
561	5.12		150	8.71
757	4.34		200	8.24
953	3.89		250	7.57
1157	3.32		300	6.93
			400	6.19
			500	5.38
			600	4.95
			700	4.54
			800	4.24
			1000	3.76

60.100

BLACK DOUGLAS; June 10, 1951; 1425 GCT; 35°57'N, 127°12'W; sounding, 2560 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 09°.

60.110

10	14.19	32.84	0	
99	9.20		10	14.19
151	8.37		20	
198	7.66		30	
289	6.92		50	
386	5.72		75	
479	5.08		100	
576	4.57		150	8.41
768	3.96		200	7.65
960	3.60		250	7.23
1165	3.20		300	6.81
			400	5.63
			500	4.97
			600	4.48
			700	4.15
			800	3.89
			1000	3.54

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

60.120

60.130

BLACK DOUGLAS; June 10, 1951; 2049 GCT; 35°37'N, 127°54.5'W; sounding, 2625 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 00°.

10	14.43	32.86	0	14.6
99	9.84		10	14.43
151	8.26		20	14.4
198	7.88		30	13.9
292	6.96		50	13.4
325p	6.74		75	10.7
486	5.53		100	9.8
586	5.18		150	8.28
782	4.28		200	7.88
978	3.80		250	7.35
1182	3.25		300	6.90
			400	6.18
			500	5.48
			600	5.11
			700	4.63
			800	4.22
			1000	3.76

BLACK DOUGLAS; June 11, 1951; 0254 GCT;[a] 35°17'N, 128°37'W; sounding, 2600 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 26°.

697	4.32
720	4.30
743	4.24
767	4.18
791	4.14
814	4.11
838	4.10
862	4.00
886	3.86
911	3.93
936	3.86

60.130

61.55

BLACK DOUGLAS; June 11, 1951; 0450 GCT; 35°17'N, 128°37'W; sounding, 2600 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 11°.

10	15.24	32.99	0	15.2
107	10.26		10	15.24
157	8.64		20	15.2
207	7.94		30	15.0
305	6.72		50	14.1
410	5.85		75	12.4
510	5.06		100	11.1
610	4.60		150	8.80
807	4.00		200	8.05
1009	3.62		250	7.39
1211	3.21		300	6.78
			400	5.92
			500	5.15
			600	4.63
			700	4.29
			800	4.01
			1000	3.63
			1200	3.23

BLACK DOUGLAS; June 7, 1951; 0607 GCT; 37°37'N, 123°07.5'W; sounding, 510 fm; wind, 290°, force 3; weather, clear; sea, rough; wire angle, 29°.

9	10.33	33.51	0	10.5
87	8.64		10	10.3
133	8.22		20	10.2
174	7.88		30	10.0
216	7.72		50	9.5
256	7.54		75	8.8
344	7.20		100	8.4
430	6.95		150	8.06
520	6.46		200	7.77
610	5.69		250	7.56
709	5.15		300	7.35
			400	7.03
			500	6.60
			600	5.76
			700	5.19

63.67

67.55

BLACK DOUGLAS; June 8, 1951; 1142 GCT; 36°49'N, 123°41'W; sounding, 2050 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 00°.

10	12.30	33.03	0	12.5
99	8.56		10	12.30
151	7.83		20	12.3
199	7.26		30	12.4
293	6.42		50	10.9
392	5.72		75	8.8
486	5.26		100	8.6
586	4.92		150	7.85
782	4.18		200	7.25
977	3.74		250	6.75
1182	3.30		300	6.37
			400	5.67
			500	5.22
			600	4.88
			700	4.49
			800	4.13
			1000	3.70

BLACK DOUGLAS; June 7, 1951; 1827 GCT; 36°39'N, 122°26'W; sounding, 1120 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 15°.

10	12.68	33.24	0	12.8
95	9.00		10	12.68
143	8.48		20	12.7
186	7.98		30	12.6
273	7.36		50	9.5
365	6.40		75	9.1
453	6.12		100	9.0
547	5.66		150	8.38
737	4.88		200	7.85
927	4.24		250	7.50
1133	3.72		300	7.09
			400	6.26
			500	5.93
			600	5.42
			700	5.02
			800	4.65
			1000	4.02

a) Test cast.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 8, 1951; 0205 GCT; 36°19'N, 123°09'W; sounding, 1780 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 05°.

10	12.53	33.22	0	12.7
107	8.65		10	12.53
160	8.27		20	12.5
211	7.80		30	12.5
316	7.05		50	10.8
425	6.02		75	9.0
529	5.60a)		100	8.8
634	4.80		150	8.36
840	4.24		200	7.89
1051	3.58		250	7.49
1256	3.18		300	7.15
			400	6.25
			500	5.70
			600	5.05
			700	4.56
			800	4.31
			1000	3.75
			1200	3.26

BLACK DOUGLAS; June 14, 1951; 0617 GCT; 35°53'N, 122°23'W; sounding, 1780 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 04°.

10	13.79	33.12	0	13.9
98	9.10		10	13.79
151	8.42		20	13.8
199	7.84		30	13.7
291	6.79		50	11.1
387	6.15		75	9.9
480	5.50		100	9.1
579	5.10		150	8.44
774	4.40		200	7.84
970	4.01		250	7.25
1175	3.54		300	6.71
			400	6.07
			500	5.40
			600	5.01
			700	4.64
			800	4.33
			1000	3.95

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

67.65

BLACK DOUGLAS; June 14, 1951; 1134 GCT; 36°03'N, 122°02'W; sounding, 750 fm; wind, 220°, force 1; weather, overcast; sea, slight; wire angle, 15°.

70.55

10	13.60	0	13.6
96	9.56	10	13.60
147	8.46	20	13.5
193	7.93	30	13.5
286	6.96	50	11.2
384	6.59	75	9.7
477	5.99	100	9.5
576	5.48	150	8.41
770	4.61	200	7.86
964	4.18	250	7.28
1169	3.59	300	6.89
		400	6.50
		500	5.88
		600	5.38
		700	4.90
		800	4.52
		1000	4.09

70.60

BLACK DOUGLAS; June 13, 1951; 2241, 2005 GCT; 35°33'N, 123°06'W; sounding, 2160 fm; wind, 330°, force 2;[b] weather, overcast; sea, very rough; wire angle, 12°, 09°.

70.70

10	13.14	33.17	0	13.3
97	10.02		10	13.14
150	8.69		20	13.1
196	7.95		30	13.0
287	6.84		50	12.4
384	5.89		75	11.1
475	5.62		100	9.9
571	5.32		150	8.69
760	4.58		200	7.88
949	3.98		250	7.24
1152	3.46		300	6.70
			400	5.84
611c)	5.24		500	5.51
983	3.94		600	5.26
1169	3.45		700	4.86
1449	2.85		800	4.43
1682	2.44		1000	3.87
1919	2.11		1200	3.34
2159	1.92		1500	2.78
2402	1.82		2000	2.03
2651	1.74		2500	1.80
2902	1.64			

a) Alternate value, 5.51°C, not used in interpolation.
b) Wind increased to force 4 at time of deep cast.
c) Overlapping casts; reconciliation of temperature curve when necessary.

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

70.80

BLACK DOUGLAS; June 13, 1951; 1232 GCT; 35°13'N, 123°48'W; sounding, 2260 fm; wind, 320°, force 6; weather, overcast; sea, high;

70.90

wire angle, 04°.

10	13.53	33.16	0	13.7
99	9.64		10	13.53
150	8.48		20	13.5
198	7.88		30	13.5
292	6.68		50	13.5
391	5.96		75	10.8
486	5.42		100	9.6
586	5.06		150	8.48
781	4.32		200	7.87
974	3.84		250	7.25
1177	3.38		300	6.60
			400	5.90
			500	5.37
			600	5.00
			700	4.59
			800	4.25
			1000	3.78

BLACK DOUGLAS; June 13, 1951; 0523 GCT; 34°53'N, 124°30'W; sounding, 2380 fm; wind, 330°, force 5; weather, drizzle; sea, very rough; wire angle, 11°.

10	13.58	33.17	0	13.9
98	9.24		10	13.58
150	8.41		20	13.6
197	7.76		30	13.6
287	7.12		50	13.4
381	6.14		75	10.0
471	5.66		100	9.1
567	5.23		150	8.41
755	4.52		200	7.74
944	3.99		250	7.34
1143	3.38		300	7.02
			400	6.01
			500	5.55
			600	5.09
			700	4.71
			800	4.38
			1000	3.82

70.100

BLACK DOUGLAS; June 12, 1951; 2213 GCT; 34°33'N, 125°12'W; sounding, 2520 fm; wind, 310°, force 4; weather, overcast; sea, rough;

70.110

wire angle, 08°.

10	13.49	32.95	0	13.6
98	9.46		10	13.49
150	8.60		20	13.3
197	8.16		30	13.0
292	7.06		50	12.5
391	6.16		75	10.0
486	5.17		100	9.4
534p	4.98		150	8.60
781	4.32		200	8.11
975	3.88		250	7.52
1178	3.36		300	6.98
			400	6.03
			500	5.11
			600	4.77
			700	4.50
			800	4.28
			1000	3.82

BLACK DOUGLAS; June 12, 1951; 1440 GCT; 34°13'N, 125°54'W; sounding, 2580 fm; wind, 340°, force 4; weather, drizzle; sea, rough; wire angle, 26°.

9	14.59	32.97	0	14.9
90	12.16		10	14.6
138	9.36		20	14.6
180	8.57		30	14.6
263	7.52		50	14.3
350	6.42		75	13.9
434	5.68		100	11.6
522	5.08		150	9.10
698	4.46		200	8.30
878	3.96		250	7.69
1076	3.53		300	7.04
			400	5.95
			500	5.20
			600	4.78
			700	4.45
			800	4.18
			1000	3.67

70.120

BLACK DOUGLAS; June 12, 1951; 0715 GCT; 33°53'N, 126°35.5'W; sounding, 2460 fm; wind, 320°, force 4; weather, overcast; sea,

70.130

very rough; wire angle, 08°.

10	15.24	33.10	0	
99	12.50		10	15.24
151	10.12		20	
199	8.54		30	
295	7.40		50	
394	6.13		75	
489	5.60		100	12.5
588	4.76		150	10.17
783	4.30		200	8.53
974	3.84		250	7.92
1175	3.39		300	7.35
			400	6.08
			500	5.53
			600	4.71
			700	4.45
			800	4.26
			1000	3.79

BLACK DOUGLAS; June 11, 1951; 2329 GCT; 33°33'N, 127°16.5'W; sounding, 2440 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 10°.

10	15.62	33.21	0	15.8
98	14.30		10	15.62
151	11.02		20	15.5
198	8.91		30	15.5
290	7.66		50	15.5
389	6.58		75	15.4
482	5.59		100	14.3
580	4.94		150	11.16
774	4.36		200	8.84
965	3.83		250	8.07
1167	3.41		300	7.55
			400	6.46
			500	5.44
			600	4.88
			700	4.57
			800	4.28
			1000	3.74

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 14, 1951; 2352 GCT; 35°16'N, 122°02.5'W; sounding, 1650 fm; wind, 200°, force 1; weather, overcast; sea, moderate; wire angle, 06°.

10	13.92		0	14.1
99	9.31		10	13.92
151	8.35		20	13.8
199	7.74		30	13.8
292	6.67		50	11.9
391	6.04		75	9.8
485	5.34		100	9.3
585	5.08		150	8.37
779	4.42		200	7.72
974	3.90		250	7.13
1177	3.46		300	6.60
			400	5.99
			500	5.28
			600	5.05
			700	4.72
			800	4.35
			1000	3.84

BLACK DOUGLAS; June 15, 1951; 0600 GCT; 34°34'N, 121°55'W; sounding, 2100 fm; wind, 260°, force 1; weather, overcast; sea, moderate; wire angle, 05°.

10	12.71	33.23	0	13.5
100	9.58		10	12.71
153	8.82		20	12.5
201	7.80		30	12.4
294	6.91		50	12.1
392	6.43		75	10.7
485	6.04		100	9.58
583	5.26		150	8.88
780	4.46		200	7.83
975	3.96		250	7.30
1180	3.49		300	6.88
			400	6.40
			500	5.94
			600	5.16
			700	4.73
			800	4.40
			1000	3.90

BLACK DOUGLAS; June 15, 1951; 2234 GCT; 34°09'N, 121°09'W; sounding, 1250 fm; wind, 280°, force 2; weather, overcast; sea, moderate; wire angle, 08°.

10	14.43	33.08	0	15.2
99	9.33		10	14.43
152	8.43		20	14.3
200	7.94		30	14.2
295	6.90		50	13.6
394	6.14		75	10.6
488	6.03		100	9.3
587	5.51		150	8.46
782	4.76		200	7.94
975	4.22		250	7.35
1179	3.51		300	6.86
			400	6.11
			500	6.01
			600	5.43
			700	5.00
			800	4.71
			1000	4.14

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

73.61

BLACK DOUGLAS; June 15, 1951; 1218 GCT; 34°54.5'N, 121°13'W; sounding, 320 fm; wind, calm; weather, overcast; sea, slight; wire angle, 07°.

77.55

10	13.18	33.22	0	14.2
98	9.57		10	13.18
150	9.11		20	12.9
197	8.67		30	12.4
243	8.38		50	11.5
290	8.05		75	10.5
341	7.50		100	9.6
388	7.10		150	9.11
436	6.80		200	8.64
486	6.64		250	8.34
			300	7.95
			400	7.02
			500	(6.59)

77.65

BLACK DOUGLAS; June 15, 1951; 1907 GCT; 34°19'N, 120°48'W; sounding, 410 fm; wind, 320°, force 1; weather, cloudy; sea, slight; wire angle, 10°.

80.55

10	11.84	33.15	0	14.6
97	9.47		10	11.84
148	9.12		20	12.2
195	8.57		30	12.2
240	8.15		50	10.2
297	7.81		75	9.6
338	7.52		100	9.3
385	7.10		150	9.09
433	6.84		200	8.52
481	6.60		250	8.08
584	5.83		300	7.78
			400	7.01
			500	6.48
			600	(5.70)

80.60

BLACK DOUGLAS; June 16, 1951; 0453 GCT; 33°49'N, 121°51'W; sounding, 2010 fm; wind, 280°, force 2; weather, overcast; sea, moderate; wire angle, 12°.

80.70

10	14.23		0	14.8
98	9.15		10	14.23
151	8.60		20	14.1
197	7.88		30	14.0
289	6.96		50	10.9
386	6.28		75	9.6
479	5.93		100	9.1
576	5.50		150	8.62
767	4.64		200	7.86
956	4.01		250	7.33
1160	3.49		300	6.88
			400	6.21
			500	5.86
			600	5.40
			700	4.94
			800	4.51
			1000	3.88

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

80.80

BLACK DOUGLAS; June 16, 1951; 1115 GCT; 33°29'N, 122°32'W; sounding, 2240 fm; wind, 260°, force 3; weather, overcast; sea, rough; wire angle, 15°.

80.90

10	14.27	33.12	0	14.6
96	8.94		10	14.27
147	8.57		20	12.9
192	8.24		30	12.6
281	7.52		50	11.5
374	6.70		75	10.1
463	6.01		100	8.9
557	5.65		150	8.55
740	4.74		200	8.19
927	4.11		250	7.79
1127	3.57		300	7.38
			400	6.49
			500	5.83
			600	5.48
			700	4.96
			800	4.50
			1000	3.92

80.100

BLACK DOUGLAS; June 17, 1951; 0017 GCT; 32°49'N, 123°54'W; sounding, 2400 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 12°.

80.110

10	15.60	33.04	0	15.7
98	12.22		10	15.60
150	9.26		20	15.5
198	8.62		30	15.4
289	7.41		50	15.4
384	6.34		75	14.5
475	5.75		100	12.2
572	5.33		150	9.26
760	4.49		200	8.60
951	3.89		250	7.95
1155	3.40		300	7.29
			400	6.22
			500	5.63
			600	5.20
			700	4.75
			800	4.34
			1000	3.78

80.110

BLACK DOUGLAS; June 17, 1951; 0730 GCT; 32°29'N, 124°34.5'W; sounding, 2480 fm; wind, 300°, force 3; weather, drizzle; sea, rough; wire angle, 09°.

83.55

10	15.72	33.06	0	15.7
98	12.47		10	15.72
150	9.90		20	15.5
197	8.66		30	15.5
288	7.28		50	15.4
384	6.54		75	14.0
476	5.64		100	12.5
574	5.16		150	9.90
766	4.42		200	8.60
959	3.88		250	7.75
1164	3.38		300	7.18
			400	6.42
			500	5.49
			600	5.05
			700	4.67
			800	4.30
			1000	3.78

a) Test cast.

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

BLACK DOUGLAS; June 16, 1951; 1818 GCT; 33°09'N, 123°13'W; sounding, 2340 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 15°.

10	15.47	33.04	0	15.6
94	12.82		10	15.47
143	9.64		20	15.5
188	8.62		30	15.5
277	7.49		50	15.4
372	6.41		75	14.6
462	5.74		100	12.6
557	5.20		150	9.41
746	4.46		200	8.46
933	3.92		250	7.83
1131	3.52		300	7.22
			400	6.19
			500	5.52
			600	5.00
			700	4.61
			800	4.28
			1000	3.77

BLACK DOUGLAS; June 17, 1951; 0555 GCT;[a] 32°29'N, 124°34.5'W; sounding, 2480 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 12°.

754	4.40
778	4.38
802	4.35
826	4.25
850	4.22
874	4.17
899	4.05
923	4.02
949	3.94
973	3.88
998	3.81

YELLOWFIN; May 31, 1951; 2218 GCT; 33°44'N, 120°24.5'W; sounding, 650 fm; wind, 270°, force 5; weather, missing; sea, very rough; wire angle, 45°.

8	14.18	33.10	0	14.3
70	10.47		10	14.2
109	8.85		20	14.1
143	8.44		30	13.0
212	7.70		50	11.2
285	7.33		75	10.1
428	6.41		100	9.0
497	6.19		150	8.35
570	5.80		200	7.81
			250	7.48
			300	7.25
			400	6.58
			500	6.19

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 20, 1951; 0825 GCT; 33°24.5'N, 117°55'W; sounding, 340 fm; wind, 230°, force 1; weather, cloudy; sea, slight; wire angle, 00°.

10	16.65		0	16.8
99	9.61		10	16.65
151	8.84		20	16.0
198	8.24		30	14.6
244	7.80		50	12.5
291	7.52		75	10.5
343	7.63		100	9.6
390	7.13		150	8.87
439	7.05		200	8.22
488	6.68		250	7.75
			300	7.51
			400	7.10
			500	(6.57)

BLACK DOUGLAS; June 20, 1951; 0345 GCT; 33°11'N, 118°23.5'W; sounding, 670 fm; wind, calm; weather, overcast; sea, slight; wire angle, 10°.

10	17.18		0	17.8
97	9.54		10	17.18
150	8.81		20	14.2
196	8.27		30	13.2
286	7.52		50	11.3
572	5.74		75	10.9
666	5.33		100	9.5
765	5.13		150	8.81
964	4.32		200	8.23
			250	7.80
			300	(7.39)
			400	(6.59)
			500	(6.19)
			600	5.61
			700	5.25
			800	5.00
			1000	(4.15)

BLACK DOUGLAS; June 19, 1951; 1750 GCT; 32°38.5'N, 119°29'W; sounding, 740 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 00°.

10	15.43	33.49	0	16.6
99	9.16		10	15.43
153	8.15		20	13.4
201	7.86		30	11.9
295	7.30		50	10.2
395	6.76		75	9.6
489	6.22		100	9.2
588	5.72		150	8.18
684	5.34		200	7.86
786	5.18u		250	7.57
886	4.68		300	7.26
			400	6.74
			500	6.17
			600	5.67
			700	5.26
			800	4.94

a) Bathythermograph calibration cast.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

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BLACK DOUGLAS; June 20, 1951; 1015 GCT;[a] 32°24.5'N, 117°55'W; sounding, 340 fm; wind, 230°, force 1; weather, cloudy; sea, slight; wire angle, 00°. 90.30 90.30

0	17.31			
14	17.20			
28	14.85			
42	12.74			
55	11.18			
68	11.01			
82	10.46			
95	9.96			
108	9.44			
121	9.18			
135	8.92			

BLACK DOUGLAS; June 19, 1951; 2231 GCT; 32°54.5'N, 118°56'W; sounding, 920 fm; wind, calm; weather, overcast; sea, slight; wire angle, 00°. 90.37 90.45

10	16.16	33.42	0	16.6
97	8.89		10	16.16
149	8.41		20	12.6
196	8.06		30	11.4
291	7.49		50	9.8
391	6.98		75	9.2
486	6.31		100	8.9
585	5.68		150	8.41
781	4.80		200	8.04
974	4.20		250	7.73
1175	3.91		300	7.44
			400	6.94
			500	6.20
			600	5.60
			700	5.14
			800	4.73
			1000	4.14

BLACK DOUGLAS; June 19, 1951; 1216 GCT; 32°25'N, 119°57.5'W; sounding, 650 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 31°. 90.53 90.60

9	14.02	33.10	0	14.7
84	10.70		10	14.0
126	9.06		20	13.8
165	8.48		30	13.5
237	7.82		50	11.9
315	7.34		75	10.6
390	6.76		100	9.6
475	6.28		150	8.66
556	5.84		200	8.15
646	5.41		250	7.74
741	4.99		300	7.44
			400	6.69
			500	6.15
			600	5.63
			700	5.15

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

90.70

BLACK DOUGLAS; June 19, 1951; 0524, 0239 GCT; 32°04.5'N, 120°39'W; sounding, 1800 fm; wind, 280°, force 1; weather, overcast; sea, moderate; wire angle, 10°, 07°.

90.77

10	15.64	0	15.8
97	12.24	10	15.64
150	9.67	20	15.5
196	8.74	30	15.3
288	7.52	50	15.1
385	6.54	75	14.3
478	5.88	100	12.2
576	5.70	150	9.67
767	4.78	200	8.68
958	4.17	250	7.96
1159	3.64	300	7.39
		400	6.41
988a)	3.98	500	5.83
1177	3.48	600	5.67
1457	2.89	700	5.20
1693	2.43	800	4.61
1930	2.13	1000	4.01
2169	1.94	1200	3.55
2412	1.80	1500	2.80
2657	1.74	2000	2.06
2906	1.64	2500	1.78

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 18, 1951; 2226 GCT;[b] 31°53'N, 121°08'W; sounding, 2240 fm; wind, 280°, force 1; weather, overcast; sea, rough; wire angle, missing.

0	16.38		
14	16.28		
28	16.17		
41	16.02		
55	14.52		
68	14.04		
81	13.36		
94	12.42		
107	12.00		
120	10.58		
134	9.83		

90.80

BLACK DOUGLAS; June 18, 1951; 2010 GCT; 31°45'N, 121°19'W; sounding, 2070 fm; wind, 270°, force 2; weather, overcast; sea, rough; wire angle, 03°.

90.90

10	16.04	0	16.1
98	11.64	10	16.04
150	9.41	20	16.0
197	8.52	30	15.6
291	7.24	50	15.5
390	6.19	75	13.1
484	5.62	100	11.6
583	5.52	150	9.41
779	4.56	200	8.50
973	4.04	250	7.73
1177	3.52	300	7.14
		400	6.09
		500	5.60
		600	5.49
		700	4.96
		800	4.48
		1000	3.97

BLACK DOUGLAS; June 18, 1951; 1403 GCT; 31°25'N, 121°59'W; sounding, 2160 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 10°.

10	16.19	33.10	0	16.3
98	10.31		10	16.19
150	9.03		20	16.0
197	8.22		30	15.9
288	6.96		50	15.6
384	6.07		75	12.5
476	5.72		100	10.3
572	5.08		150	9.03
763	4.54		200	8.21
953	3.90		250	7.48
1155	3.38		300	6.83
			400	5.98
			500	5.61
			600	4.96
			700	4.69
			800	4.43
			1000	3.76

a) Overlapping casts; reconciliation of temperature curve when necessary.
b) Bathythermograph calibration cast.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 18, 1951; 0810 GCT; 31°04.5'N, 122°40'W; sounding, 2300 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 18°.

10	16.13	0	16.1
94	10.75	10	16.13
145	9.24	20	16.1
190	8.44	30	15.9
276	7.10	50	15.5
365	6.31	75	13.0
451	5.74	100	10.3
542	5.20	150	9.15
720	4.62	200	8.29
905	3.90	250	7.43
1107	3.42	300	6.87
		400	6.07
		500	5.45
		600	4.98
		700	4.68
		800	4.34
		1000	3.65

BLACK DOUGLAS; June 18-17, 1951; 0154, 2305 GCT; 30°44.5'N, 123°20'W; sounding, 2180 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 15°, 20°.

10	16.16	0	16.3
94	12.36	10	16.16
142	9.41	20	16.1
184	8.54	30	15.9
271	7.20	50	15.5
361	6.47	75	13.9
447	5.69	100	11.9
540	5.05	150	9.23
725	4.38	200	8.28
912	4.00	250	7.49
1113	3.51	300	6.92
		400	6.14
920b)	3.97	500	5.29
1093	3.52	600	4.78
1355	3.01	700	4.45
1572	2.60	800	4.22
1792c)	2.26	1000	3.85
2018	2.07	1200	3.30
2250	1.90	1500	2.75
2489	1.80	2000	2.08
2736	1.71	2500	1.79

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

BLACK DOUGLAS; June 17, 1951; 1830 GCT;[a] 90.100
31°15'N, 123°41'W; sounding, 2260 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 10°. 90.110

0	16.26
14	16.25
27	15.72
41	15.69
68	14.41
82	12.68
95	11.40
108	10.54
121	10.08
133	9.68

YELLOWFIN; May 30, 1951; 2212 GCT; 90.110
32°50'N, 117°31.5'W; sounding, 430 fm; wind, 190°, force 1; weather, partly cloudy; sea, moderate; wire angle, 13°. 93.30

10	16.06	33.38	0	16.5
96	9.37		10	16.06
148	9.12		20	14.2
196	9.02		30	12.0
245	8.77		50	10.3
293	8.62		75	9.5
346	8.22		100	9.3
394	7.82		150	9.10
443	7.47		200	8.99
			250	8.75
			300	8.58
			400	7.78

a) Bathythermograph calibration cast.
b) Overlapping casts; reconciliation of temperature curve when necessary.
c) When raising cast, meter wheel stuck from bottom to this depth; average slippage values were substituted so a small error in depth may exist.

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

93.40

YELLOWFIN; June 4, 1951; 0353 GCT; 32°30'N, 118°12.5'W; sounding, 950 fm; wind, 330°, force 2; weather, overcast; sea, moderate; wire angle, 25°.

93.50

9	15.46	33.46		
89	9.08			
136	8.50			

93.60

YELLOWFIN; June 4, 1951; 1611 GCT; 31°48.5'N, 119°31'W; sounding, 1200 fm; wind, 330°, force 2; weather, overcast; sea, rough; wire angle, 15°.

93.70

10	14.06	33.17	0	14.4
99	9.63		10	14.06
153	9.06		20	13.9
203	8.77		30	13.8
302	7.91		50	12.3
406	7.08		75	10.7
505	6.16		100	9.6
609	5.60		150	9.09
812	4.64		200	8.79
1010	3.96		250	8.39
1214	3.38		300	7.94
			400	7.14
			500	6.21
			600	5.65
			700	5.18
			800	4.70
			1000	3.99

93.80

YELLOWFIN; June 5, 1951; 0503 GCT; 31°09'N, 120°53'W; sounding, 2200 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 32°.

97.32

8	16.02	33.17	0	16.1
94	13.40		10	16.0
141	9.82		20	16.0
188	8.98		30	16.0
282	7.54		50	16.2
			75	14.1
			100	13.1
			150	9.63
			200	8.76
			250	7.98

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; June 4, 1951; 0955 GCT; 32°09'N, 118°51'W; sounding, 700 fm; wind, 330°, force 2; weather, missing; sea, moderate; wire angle, 14°.

10	15.50	33.37	0	15.8
98	9.06		10	15.50
152	8.57		20	14.6
201	8.10		30	12.3
299	7.36		50	10.7
402	6.71		75	9.7
500	6.14		100	9.0
604	5.65		150	8.60
703	5.16		200	8.11
806	4.70		250	7.69
1006	4.11		300	7.35
			400	6.73
			500	6.14
			600	5.67
			700	5.19
			800	4.72
			1000	4.14

YELLOWFIN; June 4, 1951; 2212 GCT; 31°29.5'N, 120°07.5'W; sounding, 2200 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 18°.

10	14.88	33.02	0	15.1
92	11.18		10	14.88
142	10.16		20	14.6
187	8.60		30	14.4
278	7.21		50	13.5
373	6.25		75	11.8
464	5.95		100	11.1
560	5.60		150	9.95
750	4.68		200	8.31
940	4.10		250	7.54
1141	3.53		300	6.96
			400	6.14
			500	5.83
			600	5.44
			700	4.92
			800	4.51
			1000	3.93

YELLOWFIN; June 7, 1951; 0237 GCT; 32°09'N, 117°16.5'W; sounding, 700 fm; wind, 290°, force 3; weather, cloudy; sea, moderate; wire angle, 18°.

9	16.69	0	16.9
94	9.58	10	16.6
146	8.97	20	14.5
193	8.33	30	13.0
288	7.87	50	11.7
387	7.40	75	10.3
482	6.92	100	9.5
583	6.18	150	8.93
679	5.53	200	8.25
780	4.98	250	8.00
978	4.33	300	7.81
		400	7.35
		500	6.81
		600	6.03
		700	5.40
		800	4.90
		1000	(4.25)

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

YELLOWFIN; June 6, 1951; 2126 GCT; 31°58'N, 117°52.5'W; sounding, 750 fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 12°.

10	16.16	33.37	0	16.6
97	9.76		10	16.16
150	8.82		20	15.0
199	8.08		30	13.1
296	7.08		50	11.6
398	6.80		75	10.2
496	6.24		100	9.7
598	5.71		150	8.82
798	4.76		200	8.07
995	4.19		250	7.50
			300	7.06
			400	6.79
			500	6.21
			600	5.70
			700	5.19
			800	4.75
			1000	(4.18)

YELLOWFIN; June 6, 1951; 1005 GCT; 31°16'N, 119°11'W; sounding, 1950 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 25°.

9	14.26	33.28	0	14.3
80	10.49		10	14.3
107	9.67		20	14.0
158	8.94		30	13.7
206	8.26		50	12.6
304	7.66		75	11.3
396	7.04		100	10.1
586	5.64		150	9.05
776	4.68		200	8.34
972	4.00		250	7.96
1178	3.47		300	7.69
			400	7.01
			500	6.27
			600	5.55
			700	5.04
			800	4.59
			1000	3.90

YELLOWFIN; June 5, 1951; 1556 GCT; 30°19.5'N, 121°07.5'W; sounding, 2200 fm; wind, 340°, force 3; weather, overcast; sea, rough; wire angle, 18°.

10	16.68	33.37	0	16.9
96	13.34		10	16.68
150	10.64		20	16.7
198	9.19		30	16.6
295	7.58		50	16.6
398	6.52		75	16.1
495	5.49		100	13.2
597	5.17		150	10.64
797	4.38		200	9.15
994	3.80		250	8.26
1197	3.29		300	7.51
			400	6.48
			500	5.48
			600	5.16
			700	4.79
			800	4.37
			1000	3.80

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

97.40

YELLOWFIN; June 6, 1951; 1629 GCT; 31°36.5'N, 118°32.5'W; sounding, 950 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 16°.

97.50

10	16.04	33.40	0	15.9
105	9.16		10	16.04
157	8.58		20	16.0
210	8.38		30	15.9
315	6.89		50	13.5
425	6.58		75	10.6
530	5.84		100	9.5
636	5.27		150	8.64
843	4.44		200	8.41
1053	3.81		250	7.94
1255	3.35		300	7.03
			400	6.62
			500	6.09
			600	5.45
			700	4.98
			800	4.59
			1000	3.95

97.60

YELLOWFIN; June 5, 1951; 2115 GCT; 30°38.5'N, 120°32.5'W; sounding, 2250 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 15°.

97.80

10	16.52	33.27	0	16.8
97	14.68		10	16.52
151	10.14		20	16.4
199	9.00		30	16.4
297	7.54		50	16.0
400	6.32		75	15.8
498	5.62		100	14.6
601	5.13		150	10.25
803	4.38		200	8.96
1000	3.79		250	8.20
1204	3.35		300	7.50
			400	6.32
			500	5.61
			600	5.14
			700	4.73
			800	4.39
			1000	3.79

97.90

YELLOWFIN; June 7, 1951; 0736 GCT; 31°40.5'N, 116°46.5'W; sounding, 230 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 12°.

100.30

10	15.73	33.34	0	17.2
96	9.43		10	15.73
149	9.24		20	14.1
197	9.38		30	12.6
246	8.91		50	9.8
295	8.64		75	9.5
349	8.24		100	9.4
			150	9.25
			200	9.38
			250	8.85
			300	8.61

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

100.40

YELLOWFIN; June 7, 1951; 1320 GCT; 31°20'N. 117°30.5'W; sounding, 1000 fm; wind, 300°, force 3; weather, overcast; sea, rough; wire angle, 18°.

100.50

10	16.72	33.37	0	16.6
96	12.46		10	16.72
150	9.90		20	16.7
198	9.00		30	16.6
295	7.96		50	15.2
396	6.85		75	14.5
493	6.50		100	12.2
594	5.55		150	9.90
792	4.80		200	8.98
985	4.14		250	8.41
1186	3.63		300	7.90
			400	6.83
			500	6.48
			600	5.52
			700	5.10
			800	4.77
			1000	4.09

100.60

YELLOWFIN; June 8, 1951; 0048 GCT; 30°42'N, 118°51'W; sounding, 2100 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 02°.

100.70

10	16.74	33.37	0	16.9
120	10.11		10	16.74
181	8.92		20	16.7
241	8.10		30	15.5
362	6.52		50	14.1
477	6.28		75	11.6
597	5.45		100	10.8
713	4.88		150	9.50
949	4.02		200	8.65
1174	3.46		250	8.00
1389	3.02		300	7.23
			400	6.40
			500	6.19
			600	5.43
			700	4.94
			800	4.55
			1000	3.88

100.80

YELLOWFIN; June 8, 1951; 1320 GCT; 30°03'N, 120°16'W; sounding, 2200 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 09°.

100.90

10	17.15	33.42	0	17.2
108	10.98		10	17.15
162	9.48		20	17.2
216	8.86		30	17.1
324	7.53		50	16.7
438	6.20		75	13.9
544	5.74		100	11.5
651	5.28		150	9.80
862	4.42		200	9.03
1073	3.75		250	8.50
1275	3.26		300	7.85
			400	6.63
			500	5.90
			600	5.50
			700	5.07
			800	4.68
			1000	3.95

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; June 7, 1951; 1845 GCT; 31°02.5'N, 118°07.5'W; sounding, 900 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 18°.

10	16.30	33.29	0	16.4
95	11.84		10	16.30
147	9.48		20	16.3
195	9.20		30	16.2
290	9.11		50	14.7
			75	12.9
			100	11.5
			150	9.45
			200	9.19
			250	9.13

YELLOWFIN; June 8, 1951; 0710 GCT; 30°22'N, 119°34'W; sounding, 2100 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, missing.

8	15.98	33.16
84	12.45	
122	9.78	
160	9.30	
237	8.69	

YELLOWFIN; June 8, 1951; 1906 GCT; 29°42'N, 120°57'W; sounding, 2200 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 18°.

10	16.38	33.26	0	16.4
94	12.06		10	16.38
145	10.02		20	16.4
191	9.00		30	16.3
283	7.66		50	15.3
381	6.58		75	14.2
474	5.94		100	11.8
571	5.42		150	9.85
762	4.57		200	8.85
960	3.95		250	8.10
1149	3.46		300	7.45
			400	6.41
			500	5.79
			600	5.27
			700	4.82
			800	4.44
			1000	3.85

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; June 10, 1951; 1007 GCT; 30°51'N, 116°57'W; sounding, 1100 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 07°.

10	16.20	33.35	0	16.1
109	9.54		10	16.20
164	8.80		20	13.4
218	9.00		30	11.5
328	8.01		50	10.3
443	7.04		75	9.7
552	6.42		100	9.6
661	5.60		150	8.90
875	4.73		200	8.96
1089	3.91		250	8.79
1294	3.40		300	8.29
			400	7.38
			500	6.70
			600	6.09
			700	5.40
			800	4.99
			1000	4.25

YELLOWFIN; June 9, 1951; 2350 GCT; 30°25'N, 117°46'W; sounding, 1400 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 32°.

8	15.76	33.40	0	16.1
80	10.07		10	15.8
134	9.58		20	14.5
177	9.10		30	11.9
264	7.66		50	10.2
355	7.13		75	9.8
444	6.58		100	10.2
528	5.93		150	9.39
698	5.10		200	8.77
883	4.46		250	7.81
			300	7.42
			400	6.87
			500	6.16
			600	5.55
			700	5.10
			800	4.73

YELLOWFIN; June 9, 1951; 1030 GCT; 29°44'N, 119°07.5'W; sounding, 1860 fm; wind, 340°, force 3; weather, overcast; sea, rough; wire angle, 19°.

9	17.12	0	17.1
93	13.78	10	17.1
144	10.72	20	17.1
191	9.53	30	17.1
283	8.04	50	16.0
380	6.96	75	15.3
474	6.24	100	13.6
572	5.67	150	10.52
764	4.89	200	9.35
956	4.18	250	8.53
1157	3.66	300	7.83
		400	6.79
		500	6.08
		600	5.54
		700	5.12
		800	4.75
		1000	4.05

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; June 10, 1951; 0603 GCT; 30°42'N, 117°15'W; sounding, 450 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 14°. 103.35 103.40

10	15.42	33.31	0	16.0
97	9.48		10	15.42
149	9.22		20	15.0
195	8.83		30	12.8
238	8.45		50	10.4
282	7.96		75	9.6
330	7.44		100	9.5
375	6.94		150	9.22
464	6.18		200	8.78
562	5.72		250	8.34
659	5.29		300	7.75
			400	6.69
			500	6.00
			600	5.55

YELLOWFIN; June 9, 1951; 1634 GCT; 30°04'N, 118°29'W; sounding, 1800 fm; wind, 340°, force 2; weather, overcast; sea, rough; wire angle, 15°. 103.50 103.60

10	17.04	33.08	0	17.0
94	11.88		10	17.04
144	9.98		20	17.0
189	9.23		30	17.0
280	8.04		50	16.3
376	6.78		75	14.2
			100	11.7
			150	9.85
			200	9.07
			250	8.41
			300	7.80

YELLOWFIN; June 9, 1951; 0423 GCT; 29°26.5'N, 119°45.5'W; sounding, 2200 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 04°. 103.70 103.80

10	17.32	33.44	0	17.1
110	11.77		10	17.32
166	9.71		20	17.3
221	8.46		30	17.3
331	6.87		50	16.1
446	6.29		75	15.0
557	5.52		100	12.1
667	5.18		150	10.25
882	4.37		200	8.88
1098	3.78		250	8.00
1303	3.27		300	7.25
			400	6.48
			500	5.94
			600	5.37
			700	5.08
			800	4.72
			1000	4.02

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
107.35	HORIZON; June 13, 1951; 1048 GCT;[a] 30°31'N, 116°25'W; sounding, 920 fm; wind, 340°, force 2; weather, overcast; sea, rough; wire angle, 10°.							
24	-	4.87	0.48					
74	13.62	5.07	0.59					
153	9.80	3.50	1.54					
251	8.43	1.90	-		30		4.92	
349	8.29	0.65	2.63		50		5.03	
					75		5.05	
					100		4.88	
					150	9.86	3.59	
					200	9.03	(2.66)	
					250	8.44	(1.93)	
					300	8.29	(1.25)	
107.40	HORIZON; June 13, 1951; 1447 GCT;[a] 30°23'N, 116°46.5'W; sounding, 1420 fm; wind, 320°, force 1; weather, cloudy; sea, very rough; wire angle, 05°.							
25	-	5.06	0.50					
75	14.15	5.34	0.56					
155	9.89	3.55	1.57					
255	8.42	2.31	2.18		30		5.12	0.50
356	7.56	1.15	2.72		50		5.29	0.53
					75	14.15	5.34	0.56
					100		5.20	0.65
					150	10.00	3.68	1.48
					200	9.17	2.96	1.91
					250	8.47	2.38	2.16
					300	8.00	1.81	2.41
107.60	HORIZON; June 14, 1951; 0135 GCT;[a] 29°35.5'N, 117°58'W; sounding, 1900 fm; wind, 340°, force 1; weather, overcast; sea, moderate; wire angle, 00°.							
25	-	5.05	0.49					
75	14.24	5.28	-					
155	9.82	3.71	1.49					
255	8.43	2.21	2.26		30		5.09	
356	7.39	1.46	2.63		50		5.24	
					75	14.24	5.28	
					100		5.16	
					150	9.91	3.86	
					200	9.16	2.97	
					250	8.50	2.28	
					300	7.95	1.85	
107.70	HORIZON; June 14, 1951; 0705 GCT;[a] 29°10.5'N, 118°34'W; sounding, 1450 fm; wind, 340°, force 1; weather, cloudy; sea, slight; wire angle, 07°.							
25	-	4.82	0.50					
74	15.52	4.87	0.53					
153	10.73	3.76	1.43					
252	8.57	2.22	-		30		4.83	
352	7.88	1.14	2.72		50		4.87	
					75		4.87	
					100		4.65	
					150	10.87	3.80	
					200	9.43	(3.04)	
					250	8.61	(2.27)	
					300	8.12	(1.67)	

a) Because it was necessary to estimate depths from wire length and wire angle following the loss of all unprotected thermometers (see footnote, Station 120.60), data have been omitted on all stations after June 9 with wire angles greater than 10°. On each cast five Nansen bottles were used, four with a single protected reversing thermometer.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; June 14, 1951; 1212 GCT;[a] 28°54'N, 119°17.5'W; sounding, 2070 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 00°. 107.80

25	-		5.02	0.43			
75	15.85		5.26	-			
155	10.91		2.86	-			
255	9.84		1.24	2.32	30		5.06
356	-		0.65	2.74	50		5.18
					75	15.85	5.26
					100		4.98
					150	11.00	3.03
					200	10.41	1.99
					250	9.90	1.30
					300		0.92

HORIZON; June 11, 1951; 1757 GCT;[a] 27°41'N, 120°18.5'W; sounding, 2220 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 05°. 110.100

25	-		4.90	0.50				
75	16.27		5.07	0.50				
155	11.70		4.87	0.97				
256	8.64		3.12	1.86	30		4.96	0.50
356	7.22		1.99	2.40	50		5.05	0.50
					75	16.27	5.07	0.50
					100		5.04	0.57
					150	11.97	4.90	0.93
					200	10.10	4.30	1.36
					250	8.26	3.22	1.80
					300	7.97	2.59	2.11

HORIZON; June 11, 1951; 1122 GCT;[a] 27°16.5'N, 120°54.5'W; sounding, 2030 fm; wind, 010°, force 5; weather, missing; sea, rough; wire angle, 08°. 110.110

25	-		5.23	0.47				
74	16.88		5.23	0.51				
153	13.39		5.13	0.63				
252	9.03		3.38	-	30		5.23	0.47
351	7.73		1.66	2.41	50		5.23	0.48
					75		5.23	0.51
					100		5.21	0.55
					150	13.50	5.15	0.63
					200	11.00	4.63	
					250	9.07	3.43	
					300	8.38	2.51	

HORIZON; June 6, 1951; 1710 GCT; 29°12'N, 115°39'W; sounding, 830 fm; wind, 290°, force 4; weather, overcast; sea, rough; wire angle, 11°. 113.35

1	-		5.86	0	15.9	(5.86)
11	15.87	33.33	5.31	10	15.9	5.37
26	-		5.04	20		5.08
51	-		5.26	30		5.05
74	-		4.74	50		5.27
99	11.36		3.77	75		4.70
151	9.90		2.55	100		3.77
198	9.56		1.86	150	9.91	2.59
290	8.84		1.10	200	9.53	1.83
387	8.13		0.59	250	9.16	1.38
479	-		0.42	300	8.78	1.03
576	6.47b)		0.32	400	8.01	0.55
768	5.46		0.28	500	7.03	0.40
958	4.47		0.40	600	6.34	0.32
1159	3.76		0.60	700	5.81	0.30
				800	5.30	0.30
				1000	4.30	0.44

a) See footnote, page 230.
b) Alternate value, 6.54°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
113.40	HORIZON; June 6, 1951; 2105 GCT; 29°00'N, 115°57.5'W; sounding, 500 fm; wind, 360°, force 4; weather, overcast; sea, moderate; wire angle, 00°.							
0	-		5.00	0.54	0	16.5	5.00	0.54
10	16.48	33.31	5.26	0.52	10	16.48	5.26	0.52
25	-		4.89	0.52	20		4.92	0.52
50	-		5.26	0.54	30		4.92	0.53
75	-		5.24	0.82	50		5.26	0.54
99	11.08		3.99	1.32	75		5.24	0.82
153	10.08		1.73	1.32	100		3.87	1.32
201	10.41		0.68	2.66	150	10.09	1.86	1.32
294	10.17		0.31	2.80	200	10.40	0.71	2.65
393	9.54		0.32	2.85	250	10.31	0.38	2.75
486	-		0.22	2.84	300	10.15	0.30	2.81
584	7.34		0.21	2.94	400	9.47	0.30	2.85
779	5.60		0.26	3.11	500	8.35	0.21	2.85
969	4.61		0.36	3.14	600	7.16	0.22	2.96
1170	3.80		0.56	3.09	700	6.25	0.25	3.05
					800	5.47	0.27	3.11
					1000	4.50	0.39	3.14
113.50	HORIZON; June 7, 1951; 0256 GCT; 28°41'N, 116°42'W; sounding, 2030 fm; wind, 300°, force 5; weather, overcast; sea, very rough; wire angle, 16°.							
0	-		5.52	-	0	17.2	5.52	
9	17.21	33.43	5.00	0.50	10	17.2	4.99	0.50
24	-		4.95	0.51	20	17.2	4.96	0.50
48	-		5.48	0.50	30		5.01	0.51
72	-		4.60	0.96	50		5.48	0.50
95	11.12		3.86	1.36	75		4.49	1.09
146	10.07		2.45	2.04	100		3.71	1.42
192	9.95		1.27	2.46	150	10.05	2.35	2.10
281	9.45		0.42	2.78	200	9.92	1.14	2.50
376	8.46		0.26	2.97	250	9.64	0.58	2.69
467	-		0.23	3.04	300	9.29	0.37	2.83
561	6.82		0.22	3.04	400	8.17	0.25	3.00
746	5.42		0.24	-	500	7.27	0.23	3.04
934	4.46		0.40	3.18	600	6.55	0.24	(3.05)
1136	3.84		0.56	3.20	700	5.77	0.24	(3.09)
					800	5.11	0.26	(3.14)
					1000	4.24	0.48	3.18
113.60	HORIZON; June 7, 1951; 0841 GCT; 28°21.5'N, 117°27.5'W; sounding, 2000 fm; wind, 300°, force 4; weather, missing; sea, very rough; wire angle, 02°.							
0	-		4.54	0.52	0		4.54	0.52
10	16.89	33.59	4.56	0.49	10	16.89	4.56	0.49
25	-		4.60	0.82	20		4.58	0.50
50	-		2.48	1.78	30		4.60	1.13
74	-		2.06	1.97	50		2.48	1.78
98	9.86		1.94	2.10	75		2.06	1.98
151	9.54		1.35	-	100		1.94	2.11
196	9.61		0.66	2.66	150	9.54	1.38	2.37
287	8.64		0.46	2.82	200	9.60	0.64	2.67
383	7.80		0.29	2.98	250	9.11	0.51	2.77
475	-		0.15	3.04	300	8.53	0.44	2.84
573	6.02		0.23	3.04	400	7.65	0.26	3.00
768	5.12		0.23	3.11	500	6.67	0.15	3.04
					600	5.85	0.24	3.04
					700	5.39	0.24	3.08

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; June 7, 1951; 1531, 1540 GCT; 28°02.5'N, 118°12'W; sounding, 1640 fm; wind, 340°, force 4; weather, overcast; sea, very rough; wire angle, 11°, missing. 113.70

0	-		5.00	-	0	16.3	5.00	
10	16.20	33.33	5.29	-	10	16.20	5.29	
25	-		5.34	0.49	20		5.34	0.49
50	-		4.61	1.04	30		5.32	0.50
					50		4.61	1.04
74	-		3.85	1.39	75		3.82	1.40
97	10.50		3.51	-	100		3.49	(1.63)
147	9.50		2.51	-	150	9.47	2.44	(2.06)
191	9.21		1.67	-	200	9.14	1.58	(2.39)
282	7.91		1.10	2,66	250	8.45	1.24	(2.58)
376	6.76		0.65	2.91	300	7.65	1.01	2.71
467	-		0.37	3.05	400	6.60	0.54	2.95
562	5.90		0.32	3.18	500	6.17	0.33	3.09
753	4.85		0.36	-	600	5.71	0.33	
942	4.11		0.56	-	700	5.17	0.35	
1142	3.61		0.79	-	800	4.64	0.38	
					1000	3.94	0.64	

HORIZON; June 8, 1951; 1719 GCT; 28°28'N, 115°36'W; sounding, 550 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 30°. 117.40

0	-		5.22	0.53	0	15.3	5.22	0.53
9	15.30		5.14	0.53	10	15.3	5.15	0.53
22	-		5.15	0.55	20		5.15	0.54
44	-		4.98	0.54	30		5.13	0.55
64	-		4.97	0.77	50		4.98	0.57
84	11.60		3.61	1.29	75		4.87	1.01
123	10.34		2.76	1.85	100		3.19	1.55
156	10.06		1.92	2.23	150	10.07	2.11	2.16
189	10.06		0.93	-	200	10.04	0.75	2.64
222	9.98		0.55	-	250	9.86	0.52	2.74
263	-		0.52	2.75	300	9.58	0.40	2.83
299	9.58		0.40	2.84	400	8.88	0.35	2.92
385	9.00a)		0.33	2.92	500	7.74	0.38	
476	7.99		0.39	2.96				
572	7.00		0.33	-				

HORIZON; June 8, 1951; 1127 GCT; 28°13'N, 116°17'W; sounding, 2500 fm; wind, 360°, force 4; weather, overcast; sea, rough; wire angle, 03°. 117.50

0	-		5.18	0.47	0		5.18	0.47
10	16.94b)	33.48	5.18	0.47	10	16.94	5.18	0.47
25	-		5.12	0.47	20	16.9	5.15	0.46
50	-		5.29	0.48	30		5.14	0.46
76	-		4.84	-	50		5.29	0.48
100	11.51		3.78	1.27	75		4.86	0.75
153	10.18		2.37	1.93	100	11.51	3.78	1.27
199	9.74		1.81	-	150	10.23	2.46	1.89
295	9.18		0.62	2.67	200	9.75	1.82	2.33
395	7.60		0.53	2.81	250	9.42	1.15	2.54
489	-		0.23	2.90	300	9.13	0.60	2.68
589	6.52		0.22	-	400	7.56	0.52	2.81
786	5.34		0.22	3.03	500	6.95	0.23	(2.91)
979	4.44		0.39	-	600	6.45	0.22	(2.98)
1180	3.74		0.58	2.97	700	5.85	0.22	(3.02)
					800	5.26	0.24	3.03
					1000	4.36	0.42	3.00

a) Alternate value, 9.07°C, not used in interpolation.
b) Alternate value, 17.06°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
117.60	HORIZON; June 8, 1951; 0456 GCT; 27°47.5'N, 116°54'W; sounding, 2110 fm; wind, 350°, force 4; weather, overcast; sea, rough; wire angle, 11°.							
0	-		4.88	0.48	0	17.4	4.88	0.48
10	17.32	33.45	4.88	0.47	10	17.32	4.88	0.47
26	-		4.97	0.47	20		4.94	0.47
54	-		5.42	0.57	30		5.00	0.48
79	-		4.54	-	50		5.40	0.55
108	10.42		3.13	1.66	75		4.79	0.78
160	9.80		1.80	2.20	100		3.48	1.32
211	9.72		0.73	2.56	150	9.85	2.05	2.11
314	8.88		0.36	2.80	200	9.73	0.88	2.51
420	7.65		0.20	2.95	250	9.50	0.53	2.68
522	-		0.22	3.03	300	9.05	0.40	2.78
626	5.89		0.19	3.06	400	7.87	0.23	2.92
828	4.76		0.29	3.15	500	6.86	0.20	3.02
1035	4.06		0.47	3.13	600	6.06	0.20	3.06
1236	3.58		0.66	-	700	5.44	0.20	3.08
					800	4.90	0.26	3.14
					1000	4.16	0.45	3.13
					1200	3.65	0.63	3.09
117.70	HORIZON; June 7, 1951; 2040 GCT;[a] 27°30'N, 117°51.5'W; sounding, 1850 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 04°.							
0	17.56							
15	17.53							
30	16.90							
45	15.14							
60	13.05							
75	12.08							
105	10.58							
120	10.03							
117.70	HORIZON; June 7, 1951; 2202 GCT; 27°30'N, 117°51.5'W; sounding, 1850 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 15°.							
0	-		4.98	-	0		4.98	
10	17.58		5.10	0.50	10	17.58	5.10	0.50
24	-		4.94	0.50	20		4.98	0.50
48	-		5.52	0.54	30		4.99	0.51
72	-		4.74	1.01	50		5.52	0.55
95	11.00		3.40	1.56	75		4.48	1.11
144	9.48		2.55	2.04	100		3.30	1.61
187	9.25		1.91	2.28	150	9.42	2.47	2.08
273	8.73		0.73	2.75	200	9.17	1.70	2.36
365	7.50		0.53	2.94	250	8.87	0.90	2.66
452	-		0.32	3.04	300	8.44	0.64	2.82
543	5.98		0.30	3.10	400	7.12	0.45	2.98
725	5.08		0.31	3.19	500	6.29	0.30	3.07
906	4.28		0.46	3.19	600	5.64	0.30	3.14
1101	3.76		0.63	-	700	5.19	0.31	3.18
					800	4.75	0.35	3.20
					1000	4.00	0.55	

a) Bathythermograph calibration cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
HORIZON; June 9, 1951; 1010, 1023 GCT; 27°43'N, 115°33'W; sounding, 1170 fm; wind, 320°, force 6; weather, missing; sea, rough; wire angle, 00°, 03°.								120.45
0	-		5.05	0.50	0		5.05	0.50
10	17.04	33.46	5.06	0.47	10	17.04	5.06	0.47
					20	17.0	4.98	0.46
25	-		4.94	0.46	30		4.96	0.46
50	-		5.17	0.52	50		5.17	0.52
75	-		4.46	0.98	75		4.46	0.98
99	10.91		3.20	1.55	100		3.10	1.56
152	10.48		1.73	2.10	150	10.50	1.78	2.09
200	10.19		1.13	2.26	200	10.19	1.13	2.26
294	9.80		0.32	2.68	250	10.00	0.57	2.47
394	8.56		0.23	2.84	300	9.75	0.30	2.70
489	-		0.29	2.90	400	8.50	0.24	2.84
589	6.84		0.17	3.00	500	7.49	0.30	2.91
786	5.40		0.22	3.06	600	6.75	0.17	3.00
979	4.51		0.44	3.07	700	6.00	0.20	3.05
1179	3.84		0.56	-	800	5.32	0.22	3.06
					1000	4.43	0.46	(3.06)
HORIZON; June 9, 1951; 1354 GCT; 27°28.5'N, 115°55'W; sounding, 2130 fm; wind, 340°, force 5; weather, cloudy; sea, very rough; wire angle, 01°.								120.50
0	-		4.94	0.48	0	17.8	4.94	0.48
10	17.78	33.57	5.05	0.45	10	17.78	5.05	0.45
24	-		4.88	0.46	20	17.8	4.90	0.45
51	-		5.03	0.47	30		4.94	0.46
76	-		5.02	0.51	50		5.03	0.47
101	12.90		4.81	0.82	75		5.01	0.51
154	10.46		2.85	1.79	100		4.83	0.80
201	10.05		1.89	-	150	10.53	2.99	1.75
297	9.04		0.70	2.69	200	10.05	1.92	2.16
396	7.96		0.05	-	250	9.60	1.24	2.46
492	-		0.05	3.09	300	9.05	0.66	2.70
592	6.5 a)		0.04	-	400	(7.92)	0.05	2.99
788	5.15		0.27	3.25	500	(7.1)	0.05	(3.09)
980	4.26		0.47	3.17	600	(6.4)	0.06	(3.16)
1180	3.77		0.58	-	700	(5.7)	0.15	(3.22)
					800	5.09	0.30	3.25
					1000	4.20	0.49	(3.17)
HORIZON; June 9, 1951; 1853 GCT;[b] 27°14.5'N, 116°32.5'W; sounding, 2100 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 13°.								120.60
0	-		5.21	0.48	0	17.9	5.21	0.48
10	17.94	33.58	4.63	0.48	10	17.94	4.63	0.48
24	-		4.83	0.49	20		4.81	0.49
48	-		4.82	0.49	30		4.82	0.50
73	-		4.75	0.75	50		4.82	0.49
98	11.42		3.44	1.44	75		4.74	0.79
149	10.25		2.36	2.08	100		3.38	1.50
195	9.57		1.65	-	150	10.25	2.34	(2.09)
283	8.52		0.88	2.68	200	9.53	1.62	(2.30)
377	7.66		0.39	2.95	250	8.92	1.11	(2.52)
466	-		0.27	3.06	300	8.35	0.76	2.75
557	6.12		0.30	3.13	400	7.45	0.33	2.98
743	5.09		0.30	-	500	6.59	0.28	3.09
927	4.32		0.50	3.14	600	5.85	0.30	(3.13)
1123	3.77		0.63	-	700	5.32	0.30	(3.13)
					800	4.85	0.34	(3.14)
					1000	4.07	0.57	

a) Temperature inferred from pressure thermometer and wire depth.
b) Hydrographic wire parted while attempting deep cast; entire cast lost.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
120.80	HORIZON; June 10, 1951; 0809 GCT;[a] 26°34'N, 117°50'W; sounding, 2060 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 10°.							
24	-		4.87	0.48				
74	13.83		5.08	0.54				
152	10.18		3.33	1.54				
250	9.01		1.62	2.35	30		4.93	0.48
348	7.40		1.23	2.63	50		5.05	0.50
					75		5.08	0.55
					100		4.95	0.72
					150	10.20	3.45	1.52
					200	9.57	2.30	1.99
					250	9.01	1.62	2.35
					300	8.25	1.37	2.52
120.100	HORIZON; June 10, 1951; 1814 GCT;[a] 25°59'N, 119°10'W; sounding, 2200 fm; wind, 010°, force 3; weather, cloudy; sea, rough; wire angle, 00°.							
25	-		4.79	0.48				
75	16.74		5.08	0.45				
155	11.65		3.82	1.27				
256	9.18		1.80	2.37	30		4.84	0.47
357	-		0.87	-	50		4.98	0.45
					75	16.74	5.08	0.45
					100		4.94	0.55
					150	12.00	3.95	1.19
					200	9.40	2.74	1.92
					250		1.88	2.33
					300		1.29	
120.110	HORIZON; June 10, 1951; 2320 GCT;[a] 25°38'N, 119°44'W; sounding, 2110 fm; wind, 010°, force 4; weather, overcast; sea, rough; wire angle, 02°.							
25	-		4.34	0.45				
75	18.27		4.85	0.46				
155	12.25		3.27	1.45				
255	9.09		1.96	2.22	30		4.39	0.45
355	7.70		1.19	2.58	50		4.64	0.45
					75	18.27	4.85	0.46
					100		4.70	0.55
					150	12.50	3.46	1.35
					200	10.45	2.60	1.90
					250	9.17	2.02	2.20
					300	8.45	1.59	2.40
123.40	HORIZON; May 31, 1951; 0418 GCT; 27°18'N, 114°51.5'W; sounding, 500 fm; wind, 010°, force 5; weather, missing; sea, rough; wire angle, 47°.							
0	-		5.05	-	0	16.6	5.05	
7	16.60	33.49	5.15	0.60	10	16.60	5.14	
18	16.30		5.13	0.52	20	16.05	5.13	
34	14.79		5.36	0.68	30	15.10	5.33	
51	13.49		5.08	0.79	50	13.63	5.09	
66	12.13		4.52	1.10	75	11.40	4.11	
92	10.86		3.20	1.64	100	10.91	2.83	
113	-		2.20	-	150	11.16	0.58	
141	11.18		0.66	-	200	11.03	0.33	
175	11.12		0.46	-	250	10.66	0.28	
221	-		0.28	-				
265	10.54		0.29	-				

a) See footnote, page 230.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; May 31, 1951; 1057 GCT; 26°54.5'N, 115°28.5'W; sounding, 1960 fm; wind, 020°, force 4; weather, missing; sea, rough; wire angle, 32°. 123.50

0	-		5.17	0.46	0	17.0	5.17	0.46
9	16.98	33.46	5.08	0.46	10	17.0	5.07	0.46
22	-		5.31	0.46	20	16.9	5.31	0.46
43	-		5.33	-	30		5.33	0.47
65	-		5.54	0.53	50		5.35	0.53
85	14.92		5.56	0.50	75		5.55	0.51
130	11.70		4.40	1.14	100		5.47	0.56
172	10.32		2.60	-	150	10.85	3.57	(1.61)
255	9.24		1.56	2.38	200	9.92	2.16	(2.14)
343	8.64		0.62	2.78	250	9.30	1.61	(2.36)
428	-		0.54	2.86	300	8.90	1.01	2.62
515	6.73		0.24	3.02	400	8.01	0.54	2.84
694	5.67		0.32	3.12	500	6.86	0.28	3.00
878	4.75		-	-	600	6.23	0.24	3.10
1074	4.08		0.47	-	700	5.64	(0.33)	(3.12)
					800	5.12	(0.40)	
					1000	4.31	(0.47)	

HORIZON; May 31, 1951; 1635, 1653 GCT; 26°38'N, 116°09'W; sounding, 2110 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 14°, missing. 123.60

0	-		4.70		0	17.9	4.70	
10	17.68	33.48	4.81		10	17.68	4.81	
					20	17.7	4.73	
24	-		4.72		30		(4.73)	
48	-		4.75		50		(4.75)	
96	12.44		4.30		75		(4.55)	
147	9.87		3.10		100		4.24	
191	9.83		1.71		150	9.85	3.00	
281	8.88		0.83		200	9.78	1.59	
375	7.96		0.39		250	9.26	1.07	
466	-		0.34		300	8.69	0.68	
561	6.28		0.24		400	7.70	0.37	
749	5.16		0.27		500	6.75	0.30	
934	4.23		0.45		600	6.02	0.25	
1132	3.72		0.68		700	5.43	0.26	
					800	4.90	0.30	
					1000	4.02	0.55	

HORIZON; June 1, 1951; 1151 GCT; 26°39.5'N, 113°37'W; sounding, 1940 fm; wind, 010°, force 5; weather, missing; sea, very rough; wire angle, 14°. 127.40

0	-		5.19	0.50	0		5.19	0.50
10	16.45	33.44	5.30	0.52	10	16.45	5.30	0.52
24	-		5.22	0.49	20		5.22	0.50
49	-		5.22	0.59	30		5.21	0.50
74	-		4.12	1.16	50		5.21	0.60
98	11.03		3.13	1.60	75		4.02	1.19
150	11.08		1.11	-	100		3.05	(1.61)
195	11.25		0.31	2.73	150	11.08	1.11	
284	10.19		0.18	2.85	200	11.23	0.30	
375	9.16		0.18	2.90	250	10.67	0.21	
463	-		0.14	2.98	300	10.00	0.19	2.86
556	7.41		0.18	-	400	8.93	0.17	2.91
737	5.81		0.19	3.17	500	7.98	0.16	(3.00)
918	4.84		0.29	3.16	600	6.96	0.19	(3.08)
1117	4.08		0.48	-	700	6.07	0.20	(3.15)
					800	5.44	0.20	3.16
					1000	4.50	0.40	

	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
127.50	HORIZON; June 1, 1951, 0532 GCT; 26°23.5'N, 115°07.5'W; sounding, 1960 fm; wind, 020°, force 5; weather, missing; sea, missing; wire angle, 17°.								
	0	-		4.78	0.38	0	17.4	4.78	0.38
	10	17.35	33.44	4.40	0.40	10	17.35	4.40	0.40
	24	-		4.90	0.40	20	17.3	4.81	0.40
	49	-		5.03	0.44	30		4.93	0.41
	71	-		5.35	0.41	50		5.05	0.44
	93	13.95		4.93	0.54	75		5.33	0.41
	140	11.06		2.76	1.68	100		4.74	0.70
	178	11.41		0.91	2.38	150	11.20	2.10	1.90
	256	10.23		0.56	2.56	200	11.28	0.75	2.46
	338	9.20		0.34	2.74	250	10.33	0.58	2.55
	416	-		0.31	2.81	300	9.65	0.42	2.64
	499	6.98		0.29	2.97	400	8.32	0.31	2.80
	670	5.66		0.26	-	500	6.97	0.30	(2.97)
	849	4.80		0.30	-	600	6.15	0.28	
	1047	4.14		0.50	-	700	5.48	0.27	
						800	5.00	0.30	
						1000	4.30	0.44	
127.60	HORIZON; May 31, 1951; 2301 GCT; 26°03'N, 115°47.5'W; sounding, 2140 fm; wind, 330°, force 5; weather, cloudy; sea, high; wire angle, 14°.								
	10	19.42		4.88		10	19.42	4.88	
130.35	HORIZON; June 1, 1951; 1740 GCT; 26°22'N, 113°54.5'W; sounding, 690 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 12°.								
	0	-		5.25	0.52	0	16.2	5.25	0.52
	10	16.09	33.48	5.46	0.50	10	16.09	5.46	0.50
	25	-		5.41	0.51	20		5.45	0.50
	49	-		4.57	0.96	30		5.29	0.53
	72	-		2.55	1.72	50		4.53	1.03
	97	10.24		2.57	1.91	75		2.55	1.76
	147	11.42		0.20	2.74	100		2.55	1.96
	193	10.95		0.18	2.74	150	11.41	0.20	2.74
	239	10.64		0.18	2.75	200	10.89	0.19	2.74
	285	10.36		0.15	2.84	250	10.58	0.19	2.77
	336	-		0.20	2.74	300	10.24	0.16	2.82
	382	9.47		0.18	2.80	400	9.20	0.19	2.83
	428	8.88a)		0.18	2.85	500	8.40	0.20	2.87
	477	9.60		0.20	2.86				
	580	7.89		0.22	2.92				
130.40	HORIZON; June 1, 1951; 2130 GCT; 26°09'N, 114°07.5'W; sounding, 1450 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 07°.								
	0	-		4.78	0.53	0		4.78	0.53
	10	16.96	33.46	4.81	0.51	10	16.96	4.81	0.51
	25	-		4.83	0.50	20		4.83	0.50
	50	-		4.91	0.58	30		4.86	0.51
	74	-		4.67	-	50		4.91	0.58
	99	11.23		3.16	1.60	75		4.65	1.04
	152	10.10		1.87	2.17	100		3.15	1.62
	199	10.62		0.62	2.63	150	10.12	1.88	2.16
	294	9.42		0.36	2.88	200	10.62	0.61	2.63
	393	8.28		0.25	2.92	250	10.05	0.41	2.77
	488	-		0.22	3.06	300	9.35	0.36	2.86
	589	6.73		0.16	-	400	8.21	0.25	2.93
	784	5.54		0.20	3.24	500	7.42	0.22	3.07
	974	4.70		0.33	3.30	600	6.64	0.18	3.17
	1174	4.03		0.54	3.30	700	6.05	0.20	3.22
						800	5.47	0.20	3.24
						1000	4.60	0.37	3.30

a) Alternate value, 8.94°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; May 31, 1951; 1450 GCT; 25°56.5'N, 113°12'W; sounding, 111 fm; wind, 340°, force 3; weather, overcast; sea, slight; wire angle, 10°. 133.30

0	15.72		5.45	0.53	0	15.72	5.45	0.53
10	15.61	33.62	5.52	0.53	10	15.61	5.52	0.53
25	-		5.12	0.78	20	14.5	5.35	0.57
49	-		2.88	1.64	30	12.8	4.72	1.05
74	-		1.58	-	50	11.5	2.87	(1.72)
97	11.23		1.11	-	75	11.3	1.54	(2.09)
148	11.30		0.41	2.52	100	11.2	1.06	(2.27)
195	10.70		0.14	2.73	150	11.27	0.38	2.53
					200	(10.62)	(0.12)	(2.75)

CREST; May 31, 1951; 2033 GCT; 25°34'N, 113°46'W; sounding, 1700 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 18°. 133.40

0	17.48		5.22	0.53	0	17.48	5.22	0.53
11	17.28	33.45	5.26	0.60	10	17.3	5.26	0.60
24	-		5.27	0.58	20	17.0	5.27	0.60
53	-		4.55u	0.60	30	17.0	5.25	0.57
77	-		5.04	0.85	50	16.3		0.59
103	11.62		3.62	1.43	75	13.5	5.07	0.80
153	10.50		1.82	-	100	12.0	3.78	1.35
202	10.40		0.83	2.50	150	10.53	1.92	2.15
302	9.24		0.42	2.80	200	10.40	0.84	2.48
406	8.22		0.27	2.90	250	10.01	0.57	2.68
504	7.46		0.18	3.02	300	9.27	0.43	2.79
606	6.58		0.18	-	400	8.28	0.28	2.89
805	5.22		0.27	-	500	7.49	0.18	3.01
1026	4.38		0.39	-	600	6.61	0.18	
1220	3.74		0.63	-	700	5.89	0.22	
					800	5.26	0.26	
					1000	4.46	0.37	

CREST; June 1, 1951; 0207 GCT; 25°14.5'N, 114°24'W; sounding, 1975 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 29°. 133.50

0	16.57		5.27	0.46	0	16.57	5.27	0.46
9	16.54	33.42	5.29	0.46	10	16.5	5.29	0.46
22	-		5.53	0.50	20	15.9	5.52	0.49
48	-		5.32	0.62	30	15.3	5.50	0.52
70	-		5.12	0.78	50	14.2	5.30	0.62
94	11.86		3.82	1.39	75	12.8	5.05	0.83
139	10.42		2.44	1.96	100	11.8	3.36	1.54
182	9.72		2.06	2.18	150	10.22	2.30	2.03
269	8.54		1.29	-	200	9.46	1.91	(2.26)
361	7.92		0.52	2.84	250	8.78	1.47	(2.45)
451	7.19		0.19	3.00	300	8.28	1.02	(2.63)
540	6.30		0.19	3.02	400	7.64	0.32	2.94
719	5.20		0.34	-	500	6.72	0.20	3.02
907a)	4.35		0.43	-	600	5.89	0.25	
1102	3.77		0.91	-	700	5.30	0.32	
					800	4.80	0.35	
					1000	4.05	0.61	

a) Alternate depth, 926 meters, not used in interpolation.

	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
133.60	CREST; June 1, 1951; 0744 GCT; 24°54.5'N, 115°01.5'W; sounding, 2100 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 20°.								
	0	18.71		5.16	0.42	0	18.71	5.16	0.42
	10	18.72	33.80	5.06	0.41	10	18.72	5.06	0.41
	25	-		5.13	0.41	20	18.7	5.07	0.42
	52	-		5.14	0.45	30	18.7	5.15	0.42
	75	-		5.30	0.42	50	18.6	5.15	0.45
	102	16.50		5.27	0.48	75	18.0	5.30	0.42
	151	12.13		3.02	1.54	100	16.6	5.27	0.47
	196	11.06		1.34	2.26	150	12.18	3.50	1.49
	290	9.74		0.64	2.58	200	11.00	1.27	2.28
	388	8.54		0.40	2.82	250	10.26	0.84	2.47
	481	7.06		0.37	2.94	300	9.61	0.60	2.61
	577	6.14		0.33	3.04	400	8.37	0.40	2.84
	767	5.00		0.28	3.13	500	6.86	0.36	2.96
	964	4.24		0.45	-	600	5.98	0.31	3.06
	1160	3.71		0.71	3.09	700	5.36	0.28	3.11
						800	4.86	0.30	3.14
						1000	4.13	0.50	3.14
137.35	CREST; June 2, 1951; 0426 GCT; 25°08'N, 113°05'W; sounding, 900 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 36°.								
	0	16.60		5.12	0.46	0	16.60	5.12	0.46
	9	16.61	33.51	5.48	0.52	10	16.6	5.48	0.52
	25	-		5.44	0.48	20	16.6	5.48	0.50
	48	-		5.14	0.63	30	16.3	5.38	0.50
	73	-		4.25	1.08	50	13.9	5.10	0.64
	96	11.20		1.00	-	75	11.9	3.93	1.14
	139	11.45		0.89	2.34	100	11.2	0.93	1.73
	183	11.53		0.23	-	150	11.49	0.82	(2.43)
	271	10.68		0.15	2.77	200	11.43	0.17	(2.67)
	356	9.90		0.13	2.84	250	10.90	0.14	(2.75)
	447	8.60		0.18	2.91	300	10.40	0.14	2.80
	538	7.68		0.14	2.93	400	9.31	0.16	2.88
	738	5.98		0.19	3.08	500	8.05	0.14	2.95
	945	4.82		0.33	3.12	600	7.10	0.15	2.97
	1158	4.18		0.48	3.09	700	6.26	0.17	3.05
						800	5.59	0.21	3.11
						1000	4.61	0.38	3.11
137.40	CREST; June 2, 1951; 0022 GCT; 24°59'N, 113°23.5'W; sounding, 1700 fm; wind, 290°, force 5; weather, clear; sea, very rough; wire angle, 24°.								
	0	17.83		5.20	0.54	0	17.83	5.20	0.54
	10	17.82	33.48	4.65	0.50	10	17.82	4.65	0.50
	28	-		5.14	0.48	20	17.6	4.81	0.48
	55	-		5.51	0.50	30	17.4	5.17	0.48
	82	-		4.92	-	50	16.5	5.50	0.49
	108	12.18		3.56	1.32	75	14.6	5.33	0.58
	159	10.70		2.18	1.96	100	12.3	3.89	1.14
	210	10.44		1.03	-	150	10.82	2.37	1.88
	313	9.61		0.38	2.78	200	10.46	1.18	(2.31)
	412	8.32		0.25	-	250	10.21	0.65	(2.59)
	515	7.48		0.19	3.07	300	9.76	0.41	(2.75)
	616	6.62		0.18	3.08	400	8.47	0.25	2.94
	826	5.24		0.27	-	500	7.59	0.21	3.06
	1038	4.30		0.42	3.14	600	6.76	0.18	3.08
	1250	3.77		0.62	3.06	700	6.02	0.18	
						800	5.39	0.25	
						1000	4.44	0.41	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; June 1, 1951; 1835 GCT; 24°39'N, 114°02.5'W; sounding, 1950 fm; wind, 320°, force 5; weather, partly cloudy; sea, very rough; wire angle, 33°. 137.50

0	18.28		5.14	0.44	0	18.28	5.14	0.44
8	18.26	33.68	5.12	0.41	10	18.3	5.11	0.41
26	-		5.12	0.41	20	18.3	5.11	0.41
51	-		5.11	0.39	30	18.2	5.10	0.42
74	-		5.16	0.42	50	18.5	5.10	0.40
97	15.39		5.21	0.52	75	17.7	5.16	0.42
139	12.50		4.37	0.95	100	15.1	5.20	0.54
182	10.52		2.52	1.89	150	11.70	3.86	1.16
268	9.48		0.99	-	200	10.27	1.91	(2.09)
351	8.14		0.83	2.67	250	9.68	1.14	(2.41)
440	7.25		0.43	2.85	300	8.98	0.88	(2.57)
523	6.58		0.41	2.95	400	7.63	0.61	2.78
704	5.55		0,23	3.10	500	6.76	0.40	2.92
885	4.66		0.33	3.11	600	6.10	0.35	3.03
1083	3.96		0.58	3.00	700	5.57	0.23	3.10
					800	5.05	0.25	3.11
					1000	4.23	0.47	3.08

CREST; June 1, 1951; 1311 GCT; 24°19'N, 114°40.5'W; sounding, 2150 fm; wind, 340°, force 4; weather, partly cloudy; sea, high; wire angle, 28°. 137.60

0	18.92		5.12	0.43	0	18.92	5.12	0.43
9	18.92	33.81	5.08	0.46	10	18.9	5.08	0.46
26	-		5.16	0.44	20	18.9	5.11	0.45
53	-		5.17	0.43	30	18.8	5.16	0.43
79	-		5.21	0.48	50	18.4	5.18	0.43
104	15.45		5.33	0.54	75	17.3	5.19	0.47
152	12.00		3.78	1.27	100	15.9	5.31	0.53
199	11.40		1.37	2.30	150	12.05	4.00	1.12
293	10.42		0.55	2.73	200	11.37	1.37	2.32
384	8.96		0.44	2.88	250	10.84	0.81	2.61
479	7.94		0.19	2.94	300	10.34	0.51	2.75
571	6.89		0.19	3.00	400	8.76	0.42	2.90
					500	7.71	0.19	2.95

CREST; June 2, 1951; 1007 GCT; 24°35'N, 112°42.5'W; sounding, 450 fm; wind, 320°, force 4; weather, clear; sea, very rough; wire angle, 05°. 140.35

0	16.12		5.64	0.62	0	16.12	5.64	0.62
10	15.31	33.95	5.29	0.84	10	15.31	5.29	0.84
25	-		2.92	1.57	20	13.3	3.80	1.34
50	-		1.64	2.05	30	12.9	2.50	1.70
74	-		1.08	-	50	12.4	1.64	2.05
98	12.21		0.41	2.48	75	12.0	1.05	2.14
150	12.16		0.20	2.59	100	12.3	0.40	2.49
197	11.70		0.15	2.66	150	12.16	0.20	2.59
245	11.07		0.13	2.71	200	11.66	0.15	2.66
291	10.53		0.17	2.79	250	11.00	0.14	2.72
344	9.98		0.14	2.76	300	10.43	0.18	2.79
392	9.46		0.16	-	400	9.40	0.15	2.80
489	8.96		0.16	2.86	500	8.90	0.15	2.86
591	8.22		0.16	-	600	8.14	0.16	2.91
690	7.01		0.19	2.92	700	(6.84)	(0.19)	(2.92)

S10

CCOFI 5106

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
140.40	CREST; June 2, 1951; 1432 GCT; 24°25'N, 113°01.5'W; sounding, 1870 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 20°.							
0	16.07		5.51	0.55	0	16.07	5.52	0.55
10	16.05	33.75	5.53	0.56	10	16.05	5.53	0.56
28	-		5.48	0.62	20	16.2	5.52	0.59
56	-		3.61	1.37	30	15.9	5.46	0.63
84	-		3.12	1.60	50	13.2	4.50	1.02
112	13.00		0.61	2.54	75	12.7	3.29	1.50
164	12.39		0.19	2.62	100	12.5	1.00	2.35
216	11.63		0.16	-	150	12.55	0.25	2.60
322	10.22		0.11	2.79	200	11.90	0.14	2.66
424	8.84		0.17	3.03	250	11.13	0.13	2.72
531	7.79		0.16	2.98	300	10.49	0.12	2.77
635	6.70		0.16	3.07	400	9.18	0.17	3.00
848	5.21		0.28	3.18	500	8.07	0.18	3.00
1066	4.34		0.40	3.16	600	7.04	0.15	3.04
1276	3.75		0.66	3.14	700	6.21	0.21	3.09
					800	5.52	0.27	3.17
					1000	4.56	0.34	3.17
140.50	CREST; June 2, 1951; 2002 GCT; 24°06'N, 113°39.5'W; sounding, 2050 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 25°.							
0	18.21		5.93	0.49	0	18.21	5.93	0.49
9	17.96	33.58	5.27	0.49	10	18.0	5.27	0.49
23	-		5.23	0.46	20	17.8	5.22	0.46
50	-		5.39	0.48	30	17.8	5.25	0.46
72	-		5.49	0.51	50	17.2	5.39	0.48
96	14.04		5.02	0.69	75	16.1	5.48	0.51
140	11.45		2.94	1.65	100	14.0	4.70	0.86
185	10.43		2.01	2.08	150	11.20	2.67	1.78
274	9.64		0.77	2.66	200	10.23	1.71	2.18
367	8.30		0.56	-	250	9.81	1.00	2.52
459	7.80		0.24	2.90	300	9.34	0.67	2.72
552	6.72		0.22	3.00	400	8.10	0.44	2.84
741	5.48		0.24	3.10	500	7.40	0.23	2.97
939	4.46		0.40	3.14	600	6.36	0.23	3.02
1138	3.87		0.58	-	700	5.71	0.23	3.08
					800	5.14	0.25	3.13
					1000	4.25	0.44	(3.12)

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; June 3, 1951; 0120, 0343 GCT; 23°45.5'N, 114°17.5'W; sounding, 2020 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 09°, 12°. 140.60

0	19.08		4.92	0.44	0	19.08	4.91	0.44
10	18.89	33.78	4.68	0.45	10	18.89	4.68	0.45
25	-		4.98	0.47	20	18.7	4.82	0.46
54	-		4.98	0.42	30	18.7	5.00	0.46
78	-		5.10	0.47	50	18.6	4.99	0.43
107	15.75		5.06	0.52	75	17.9	5.09	0.46
158	11.94		2.70	1.70	100	16.2	5.10	0.50
210	11.07		1.16	2.38	150	12.15	3.27	1.30
313	10.52		0.31	2.70	200	11.18	1.32	2.32
421	8.08		0.46	-	250	10.79	0.70	2.53
526	7.18		0.22	2.99	300	10.56	0.36	2.67
630	6.32		0.19	3.11	400	8.90	0.41	2.84
836	4.97		0.30	3.11	500	7.30	0.32	2.96
1045	4.14		0.46	3.10	600	6.73	0.19	3.04
1248	3.57		0.73	3.03	700	5.70	0.20	3.11
					800	5.14	0.27	3.11
618a)	6.53		-	3.07	1000	4.31	0.41	3.10
1032	4.17		1.90	-	1200	3.67	0.66	3.08
1238	3.56		1.57	3.13	1500	2.96	0.93	3.02
1549	2.84		1.21	3.00	2000	2.20	1.49	2.81
1803	2.43		0.67	2.82	2500	1.84	2.23	2.69
2067	2.12		0.49	2.80	3000	1.66	2.50	2.68
2329	1.91		0.20	2.72				
2595	1.80		2.38	2.70				
2889	1.70		2.50	-				
3238	1.64		2.48	2.62				

CREST; June 3, 1951; 0943 GCT; 23°25'N, 114°55'W; sounding, 2050 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 08°. 140.70

0	19.01		4.73	0.42	0	19.01	4.73	0.42
10	19.01	33.78	5.15	0.42	10	19.01	5.15	0.42
25	-		5.14	0.44	20	19.0	5.15	0.44
55	-		5.15	0.43	30	19.0	5.13	0.44
79	-		5.26	0.42	50	18.4	5.13	0.44
108	14.85		3.19	0.59	75	18.2	5.27	0.42
161	11.63		-	1.60	100	16.2	4.30	0.51
213	11.36		-	-	150	11.81		1.28
316	9.66		0.49	2.72	200	11.40		(2.40)
425	8.32		0.28	2.88	250	10.99		(2.62)
529	7.32		0.19	3.01	300	9.95	(0.50)	(2.70)
632	6.48		0.18	3.04	400	8.60	0.34	2.84
836	5.07		0.28	3.14	500	7.59	0.22	2.98
1044	4.24		0.43	3.12	600	6.71	0.18	3.03
1247	3.63		0.67	3.07	700	6.00	0.19	3.08
					800	5.31	0.25	3.14
					1000	4.39	0.39	3.12

a) Overlapping casts; reconciliation of property curves when necessary.

SIO

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5106

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
140.80	CREST; June 3, 1951; 1500 GCT; 23°05'N, 115°32.5'W; sounding, 2140 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 11°.							
0	18.94		5.07	-	0	18.94	5.07	
10	18.93	33.71	5.07	-	10	18.93	5.07	
24	-		5.18	0.44	20	18.9	5.16	
49	-		5.16	0.42	30	18.6	5.19	0.44
73	-		5.30	0.44	50	18.4	5.16	0.42
97	15.66		5.25	0.53	75	17.3	5.30	0.44
148	11.52		2.70	1.77	100	15.2	5.20	0.55
195	11.18		1.00	-	150	11.50	2.53	(1.83)
287	10.52		0.20	2.82	200	11.15	0.93	(2.41)
384	8.41		0.34	2.90	250	10.81	0.37	(2.72)
476	7.66		0.20	2.98	300	10.38	0.20	2.84
574	6.70		0.16	3.12	400	8.25	0.33	2.90
768	5.30		0.24	3.22	500	7.45	0.18	3.03
963	4.36		0.39	3.20	600	6.48	0.17	3.15
1165	3.78		0.61	3.22	700	5.75	0.20	3.20
					800	5.11	0.26	3.22
					1000	4.22	0.42	3.20
140.90	CREST; June 3, 1951; 1939, 2158 GCT; 22°45.5'N, 116°11'W; sounding, 2200 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 19°, 21°.							
0	20.02		5.10	0.44	0	20.02	5.10	0.44
10	19.56	33.87	5.01	0.44	10	19.56	5.01	0.44
24	-		5.07	0.44	20	19.5	5.05	0.44
53	-		5.10	0.43	30	19.4	5.08	0.44
75	-		5.41	0.46	50	19.2	5.10	0.43
103	14.73		5.24	0.40	75	17.4	5.41	0.46
151	11.04		3.36	1.57	100	15.0	5.28	0.40
199	10.32		1.67	2.27	150	11.06	3.41	1.56
295	9.18		0.64	-	200	10.31	1.64	(2.28)
397	7.94		0.31	-	250	9.68	0.95	(2.56)
492	7.04		0.30	3.08	300	9.13	0.61	(2.72)
592	6.20		0.23	3.15	400	7.91	0.31	(2.89)
786	5.22		0.29	3.27	500	6.99	0.30	3.09
987	4.36		0.43	3.28	600	6.14	0.24	3.16
1187	3.78		0.60	3.22	700	5.60	0.24	3.23
					800	5.15	0.30	3.27
1405	3.24		0.86	3.10	1000	4.30	0.44	3.28
1540	2.89		1.13	3.12	1200	3.73	0.62	3.21
1679	2.64		1.32	-	1500	2.99	1.04	3.10
1816	2.40		1.58	2.89	2000	2.16	1.86	2.95
1956	2.22		1.80	2.94	2500	1.81	2.29	2.75
2095	2.06		1.97	2.92				
2238	1.96		2.08	2.80				
2378	1.88		2.19	2.78				
2526	1.80		2.31	2.74				
2675	1.78		2.37	2.73				
143.30	CREST; June 7, 1951; 0454 GCT; 24°11'N, 112°03'W; sounding, 114 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 12°.							
0	14.75		4.53	0.97	0	14.75	4.53	0.97
10	14.75	33.92	4.56	1.00	10	14.75	4.56	1.00
24	-		3.89	-	20	14.6	4.16	1.11
48	-		1.96	1.93	30	14.3	3.50	1.47
73	-		0.33	2.56	50	12.7	1.76	2.00
97	13.13		0.27	2.52	75	13.1	0.31	2.56
147	12.18		0.34	2.05u	100	13.0	0.27	(2.51)
					150		(0.35)	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; June 7, 1951; 0809 GCT; 24°01'N, 112°22'W; sounding, 1000 fm; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 25°. 143.35

0	17.18		5.39	0.47	0	17.18	5.39	0.47
9	17.18	33.78	5.38	0.46	10	17.1	5.38	0.46
22	-		5.33	0.48	20	17.2	5.34	0.47
50	-		4.30	1.38	30	14.8	5.25	0.55
72	-		1.85	1.83	50	13.7	4.30	1.38
97	12.77		0.82	-	75	12.9	1.67	1.88
142	12.12		0.28	2.48	100	12.8	0.80	2.23
189	11.60		0.23	-	150	12.02	0.25	2.50
280	11.08		0.17	2.72	200	11.51	0.21	2.61
380	9.60		0.16	2.77	250	11.21	0.18	2.68
476	9.16		0.14	2.78	300	10.87	0.17	2.74
572	7.90		0.14	2.84	400	9.46	0.15	2.78
769	6.24		0.19	2.94	500	8.96	0.15	2.79
975	4.56		0.37	-	600	7.62	0.15	2.86
1177	3.83		1.00u	2.98	700	6.77	0.15	2.91
					800	5.97	0.20	2.95
					1000	4.42		2.99

CREST; June 7, 1951; 1136 GCT; 23°51'N, 112°41'W; sounding, 1700 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 24°. 143.40

0	17.20		5.21	-	0	17.20	5.21	(0.50)
9	17.22	33.75	5.45	0.49	10	17.2	5.46	0.49
23	-		5.53	0.54	20	17.1	5.52	0.51
50	-		3.34	1.54	30	15.1	5.35	0.68
72	-		1.90	2.10	50	13.8	3.34	1.54
99	13.24		0.66	-	75	13.2	1.62	
					100	(13.2)	(0.63)	

CREST; June 7, 1951; 1704 GCT; 23°30'N, 113°19.5'W; sounding, 2050 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 23°. 143.50

0	19.73		5.01	-	0	19.73	5.01	
8	19.72		5.20	0.58	10	19.7	5.20	
23	-		5.16	-	20	19.6	5.17	
51	-		3.88	-	30	19.5	4.94	
73	-		1.46	2.04	50	17.7	3.90	
99	12.64		1.40	2.12	75	14.1	1.46	
145	12.61		0.51	-	100	12.6	1.38	
190	11.96		0.28	-	150	12.52	0.47	
282	10.84		0.25	-	200	11.83	0.28	
380	9.27		0.22	-	250	11.21	0.26	
473	7.64		0.16	3.02	300	10.57	0.25	
569	6.54		0.15	-	400	8.94	0.21	
763	5.19		0.25	3.12	500	7.27	0.15	
968	4.30		0.45	-	600	6.27	0.17	
1173	3.71		0.67	3.13	700	5.58	0.21	
					800	5.00	0.29	
					1000	4.18	0.49	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
143.60	CREST; June 7, 1951; 2200 GCT; 23°10'N, 113°57'W; sounding, 2100 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 20°.							
0	18.72		5.12	0.40	0	18.72	5.12	0.40
10	18.48	33.64	5.03	0.39	10	18.48	5.03	0.39
23	-		5.07	0.40	20	18.4	5.06	0.40
52	-		5.02	0.39	30	18.3	5.07	0.40
75	-		5.24	0.42	50	18.0	5.02	0.40
102	14.49		5.09	0.55	75	16.4	5.24	0.42
150	11.41		3.01	1.58	100	14.5	5.12	0.53
196	10.65		1.37	2.25	150	11.41	3.01	1.58
289	9.47		0.64	2.66	200	10.61	1.29	2.28
384	8.54		0.24	2.90	250	9.94	0.84	2.54
477	7.65		0.24	2.90	300	9.33	0.57	2.69
571	6.63		0.18	3.00	400	8.39	0.21	2.90
757	5.32		0.24	3.06	500	7.41	0.25	2.92
952	4.45		0.37	3.09	600	6.40	0.18	3.00
1148	3.77		0.64	3.02	700	5.70	0.20	3.03
					800	5.10	0.27	3.07
					1000	4.26	0.42	3.08
147.25	CREST; June 8, 1951; 2243 GCT; 23°46.5'N, 111°22.5'W; sounding, 170 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 25°.							
0	18.19		5.01	1.02	0	18.19	5.01	1.02
9	18.15	34.44	5.01	-	10	18.15	4.97	1.15
23	18.08		4.04	1.36	20	18.10	4.46	1.31
45	15.76		1.80	2.24	30	17.85	2.97	1.52
67	14.84		1.00	2.54	50	15.50	1.60	2.36
89	13.90		0.49	2.62	75	14.50	0.80	2.58
135	12.87		0.24	2.64	100	13.61	0.35	2.64
179	11.78		0.20	2.62	150	12.52	0.23	2.63
223	11.40		0.15	2.62	200	11.56	0.17	2.62
271	11.04		0.18	2.72	250	11.20	0.16	2.66
147.30	CREST; June 8, 1951; 2010 GCT; 23°39'N, 111°36'W; sounding, 190 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 10°.							
0	18.76		4.65	0.76	0	18.76	4.65	0.76
10	18.58	34.27	5.13	0.76	10	18.58	5.13	0.76
25	18.43		5.02	-	20	18.47	5.10	0.87
49	16.19		2.07	2.31	30	18.15	4.65	1.04
73	14.87		1.31	2.52	50	16.19	2.02	2.33
98	13.90		0.73	2.62	75	14.75	1.25	2.54
149	12.94		0.57	2.70	100	13.84	0.68	2.63
196	12.28		0.23	2.70	150	12.92	0.56	2.70
242	11.58		0.21	2.74	200	12.21	0.22	2.70
290	10.70		0.19	-	250	11.45	0.21	(2.75)
					300	(10.50)	(0.19)	
147.40	CREST; June 8, 1951; 1350 GCT; 23°16'N, 112°19'W; sounding, 1900 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 21°.							
0	20.64		4.94	0.66	0	20.64	4.94	0.66
10	20.64		4.92	0.67	10	20.64	4.92	0.67
23	-		4.51	1.17	20	20.6	4.61	1.06
51	-		2.90	1.90	30	18.8	4.29	1.43
74	-		1.30	2.18	50	17.4	3.10	1.87
101	12.99		0.62	2.46	75	13.8	1.25	2.18
148	12.03		0.62	2.46	100	13.0	0.64	2.46
195	11.32		0.19	2.58	150	12.00	0.60	2.46
288	10.02		0.17	2.80	200	11.25	0.19	2.59
386	8.71		0.16	2.94	250	10.55	0.18	2.73
482	7.72		0.20	3.01	300	9.86	0.17	2.82
581	6.70		0.17	3.08	400	8.55	0.18	2.95
778	5.38		0.27	3.15	500	7.53	0.20	3.02
982	4.38		0.42	3.20	600	6.56	0.17	3.09
1183	3.78		0.61	3.15	700	5.86	0.19	3.13
					800	5.25	0.30	3.15
					1000	4.30	0.43	3.20

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; June 8, 1951; 0827 GCT; 22°56'N, 112°56.5'W; sounding, 1700 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 15°.								147.50
0	18.69		5.15	0.43	0	18.69	5.15	0.43
10	18.69	33.70	5.10	0.43	10	18.69	5.10	0.43
24	-		5.39	0.54	20	17.9	5.37	0.51
54	-		4.34	0.98	30	16.5	5.35	0.59
77	-		2.42	1.78	50	14.3	4.54	0.84
106	12.28		0.87	-	75	12.0	2.57	1.72
157	11.74		0.21	2.61	100	12.2	0.98	2.28
206	11.08		0.13	2.63	150	11.82	0.52	2.59
307	9.72		0.15	2.86	200	11.17	0.15	2.62
411	8.44		0.17	2.94	250	10.46	0.14	2.74
514	7.22		0.20	3.00	300	9.81	0.15	2.85
615	6.33		0.21	3.03	400	8.57	0.17	2.93
815	5.00		0.30	3.08	500	7.40	0.19	2.99
1021	4.20		0.52	3.10	600	6.46	0.20	3.02
1224	3.61		0.86	-	700	5.72	0.21	3.05
					800	5.09	0.29	3.07
					1000	4.27	0.50	3.10
CREST; June 8, 1951; 0258 GCT; 22°36'N, 113°33.5'W; sounding, 2050 fm; wind, 340°, force 3; weather, partly cloudy; sea, rough; wire angle, 15°.								147.60
0	18.52		4.94	0.43	0	18.52	4.94	0.43
10	18.54	33.62	5.09	0.40	10	18.54	5.09	0.40
24	-		5.00	0.40	20	18.5	5.05	0.40
48	-		5.25	0.40	30	18.3	5.00	0.40
72	-		5.27	0.43	50	17.7	5.27	0.40
95	13.32		4.83	0.62	75	16.2	5.21	0.45
145	11.67		4.24	0.56u	100	13.3	4.75	
190	11.04		0.83	2.44	150	11.60	4.16	
280	10.02		0.18	-	200	10.91	0.60	
375	8.74		0.37	-	250	10.34	0.24	
466	7.62		0.31	2.88	300	9.77	0.24	
562	6.77		0.25	2.98	400	8.40	0.35	
751	5.44		0.31	3.10	500	7.31	0.27	2.95
939	4.47		0.46	-	600	6.48	0.25	3.00
1138	3.91		0.58	3.06	700	5.77	0.29	3.07
					800	5.16	0.35	3.10
					1000	4.27	0.50	3.05
CREST; June 6, 1951; 0422 GCT; 23°12'N, 111°01.5'W; sounding, 950 fm; wind, 310°, force 5; weather, clear; sea, very rough; wire angle, 07°.								150.25
0	17.41		4.62	0.92	0	17.41	4.62	0.92
10	17.37	34.24	5.33	0.96	10	17.37	5.33	0.96
25	-		3.61	1.40	20	16.4	4.50	1.23
55	-		1.81	2.23	30	15.5	3.15	1.56
80	-		0.61	2.58	50	15.6	2.05	2.22
109	13.53		0.45	2.73	75	14.5	0.70	2.53
162	12.44		0.21	-	100	13.7	0.48	2.71
215	11.54		0.17	2.66	150	12.67	0.27	2.73
317	10.70		0.20	2.84	200	11.77	0.17	2.67
424	9.82		0.17	2.82	250	11.21	0.19	2.73
528	8.34		0.16	2.91	300	10.83	0.20	2.82
631	7.04		0.16	3.02	400	10.05	0.19	2.82
835	5.42		0.19	3.12	500	8.76	0.16	2.88
1044	4.58		0.35	3.12	600	7.40	0.16	2.99
1248	3.77		0.63	3.06	700	6.42	0.17	3.07
					800	5.67	0.18	3.11
					1000	4.73	0.32	3.12

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
150.30	CREST; June 6, 1951; 0001 GCT; 23°02'N, 111°20'W; sounding, 1650 fm; wind, 310°, force 5; weather, partly cloudy; sea, moderate; wire angle, 19°.							
0	18.57		5.30	0.75	0	18.57	5.30	0.75
9	18.45	34.23	5.37	0.76	10	18.4	5.37	0.76
23	-		4.30	1.25	20	16.9	4.55	1.02
52	-		2.02	2.26	30	16.1	3.55	1.71
76	-		1.25	-	50	15.9	2.17	2.22
104	13.28		0.46	2.63	75	14.1	1.26	2.46
155	12.19		0.25	2.62	100	13.2	0.52	2.62
206	11.44		0.18	-	150	12.28	0.26	2.62
308	10.41		0.16	2.78	200	11.52	0.19	2.65
416	9.29		0.15	2.83	250	10.96	0.17	2.71
519	8.01		0.17	2.94	300	10.49	0.15	2.76
623	7.00		0.19	3.00	400	9.47	0.15	2.82
827	5.45		0.25	3.10	500	8.22	0.16	2.91
1034	4.48		0.32	3.17	600	7.20	0.19	2.99
1237	3.87		0.58	-	700	6.36	0.23	3.04
					800	5.63	0.25	3.09
					1000	4.60	0.30	3.16
150.40	CREST; June 5, 1951; 1832 GCT; 22°42'N, 111°57.5'W; sounding, 1850 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 25°.							
0	20.02		5.10	0.51	0	20.02	5.10	0.51
9	19.84	34.34	5.08	0.48	10	19.8	5.08	0.48
22	-		5.15	0.54	20	19.9	5.13	0.52
50	-		5.12	1.18	30	19.5	5.18	0.62
72	-		2.26	1.90	50	19.6	5.12	1.18
97	13.68		0.66	2.38	75	14.9	2.00	1.96
142	12.64		0.64	2.24	100	13.6	0.66	2.38
187	11.74		0.26	2.52	150	12.47	0.55	2.26
277	10.55		0.15	2.70	200	11.55	0.23	2.57
371	9.12		0.19	-	250	10.87	0.15	2.64
462	7.90		0.18	-	300	10.25	0.17	
554	7.00		0.16	-	400	8.72	0.20	
738	5.69		0.19	3.14	500	7.50	0.16	
933	4.56		0.43	-	600	6.63	0.17	
1127	3.99		0.54	3.04	700	5.94	0.18	
					800	5.30	0.21	
					1000	4.32	0.50	
150.50	CREST; June 5, 1951; 1305 GCT; 22°21'N, 112°34'W; sounding, 1940 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 16°.							
0	19.73		5.04	0.36	0	19.73	5.04	0.36
10	19.74	33.98	4.96	0.35	10	19.74	4.96	0.35
24	-		4.98	0.36	20	19.7	4.95	0.36
53	-		5.18	0.42	30	19.7	5.01	0.37
77	-		5.10	0.54	50	18.6	5.16	0.41
105	13.74		2.41	1.65	75	15.7	5.13	0.53
155	11.83		2.62u	0.90u	100	14.0	2.72	1.50
204	11.05		0.55	-	150	11.95		
299	9.58		0.31	2.73	200	11.12	0.57	
401	8.25		0.22	2.88	250	10.31	0.37	2.66
497	7.20		0.25	-	300	9.56	0.32	2.73
595	6.49		0.18	3.02	400	8.26	0.23	2.88
790	5.26		0.28	3.10	500	7.17	0.25	2.97
991	4.36		0.30	3.10	600	6.45	0.18	3.02
1191	3.75		0.65	3.04	700	5.79	0.20	3.07
					800	5.20	0.28	3.10
					1000	4.32	0.30	3.10

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; June 5, 1951; 0512, 0737 GCT; 22°01'N, 113°11'W; sounding, 2050 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 09°, 10°. 150.60

0	20.27		4.94	0.34	0	20.27	4.94	0.34
10	20.18	34.03	4.78	0.37	10	20.18	4.78	0.37
25	-		4.80	0.34	20	19.9	4.77	0.35
49	-		5.06	0.39	30	19.8	4.90	0.35
74	-		4.77	0.62	50	18.9	5.04	0.39
98	13.61		2.24	-	75	16.0	4.74	0.64
149	12.26		0.37	2.48	100	13.4	1.90	1.86
196	11.60		0.23	-	150	12.25	0.36	(2.49)
287	10.46		0.15	2.80	200	11.55	0.22	(2.62)
387	8.84		0.15	-	250	10.94	0.17	(2.73)
479	7.52		0.16	3.02	300	10.27	0.15	2.82
578	6.74		0.18	3.06	400	8.61	0.15	2.94
771	5.46		0.21	3.16	500	7.33	0.16	3.03
963	4.48		0.36	3.20	600	6.60	0.17	3.04
1167	3.77		0.63	3.08	700	5.95	0.18	3.07
					800	5.30	0.22	3.12
627a)	6.45		0.16	3.03	1000	4.31	0.39	3.14
852	5.01		0.25	3.11	1200	3.69	0.65	3.05
1087	4.02		0.48	3.09	1500	2.97	1.02	2.93
1324	3.40		0.73	2.99	2000	2.12	1.95	2.70
1562	2.83		1.14	2.91	2500	1.80	2.29	2.61
1799	2.40		1.57	2.80				
2039	2.08		2.00	2.69				
2280	1.90		2.20	2.65				
2526	1.78		2.32	2.60				
2774	1.72		2.59	2.56				

CREST; June 4, 1951; 2348 GCT; 21°40'N, 113°48'W; sounding, 2050 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 14°. 150.70

0	20.90		4.62	0.40	0	20.90	4.62	0.40
10	20.52	34.15	4.68	0.38	10	20.52	4.68	0.38
24	-		4.66	0.40	20	20.6	4.66	0.39
53	-		4.98	0.46	30	20.6	4.72	0.42
77	-		4.98	0.44	50	20.6	4.94	0.45
106	13.46		3.11	1.40	75	17.7	4.98	0.44
158	12.03		0.81	2.37	100	14.5	3.75	1.06
208	11.50		0.30	2.56	150	12.20	0.98	2.30
308	10.07		0.16	2.82	200	11.56	0.34	2.54
415	8.40		0.25	2.89	250	11.05	0.19	2.62
516	7.14		0.22	3.02	300	10.23	0.16	2.80
617	6.17		0.19	-	400	8.63	0.24	2.89
818	4.92		0.33	3.09	500	7.34	0.23	3.00
1026	4.15		0.46	3.09	600	6.33	0.19	(3.05)
1228	3.58		0.73	3.08	700	5.62	0.24	(3.08)
					800	5.02	0.31	(3.09)
					1000	4.24	0.43	3.09

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
150.80	CREST; June 4, 1951; 1834 GCT; 21°19.5'N, 114°25'W; sounding, 2100 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 10°.							
0	22.16		4.71	0.36	0	22.16	4.71	0.36
10	21.92	34.56	4.75	0.34	10	21.92	4.75	0.34
25	-		4.72	0.37	20	21.9	4.73	0.35
49	-		4.88	0.38	30	21.9	4.72	0.37
73	-		5.09	0.44	50	20.8	4.88	0.38
97	14.62		4.30	0.92	75	17.5	5.07	0.45
147	12.68		1.02	2.34	100	14.1	4.00	1.10
193	12.20		0.21	-	150	12.62	0.90	(2.36)
286	10.86		0.18	2.77	200	12.13	0.18	(2.59)
382	9.34		0.18	2.96	250	11.43	0.17	(2.72)
476	7.70		0.18	3.03	300	10.62	0.20	2.79
573	6.76		0.18	3.08	400	9.06	0.18	2.98
767	5.45		0.21	3.19	500	7.45	0.18	3.04
961	4.37		0.49	3.14	600	6.55	0.18	3.09
1163	3.82		0.64	3.13	700	5.86	0.19	3.16
					800	5.24	0.25	3.20
					1000	4.24	0.53	3.14
150.90	CREST; June 4, 1951; 1040, 1248 GCT; 20°59'N, 115°02'W; sounding, 2100 fm; wind, 310°, force 3; weather, clear;[a] sea, moderate; wire angle, 03°, 12°.							
0	22.28		4.86	0.39	0	22.28	4.86	0.39
10	22.30	34.52	4.62	0.40	10	22.30	4.62	0.40
25	-		4.68	0.42	20	22.2	4.64	0.41
50	-		4.98	0.48	30	22.0	4.76	0.43
74	-		4.98	0.55	50	20.4	4.98	0.48
98	14.08		4.08	1.01	75	16.3	4.96	0.56
150	11.85		1.15	2.33	100	14.1	3.81	1.11
197	11.24		0.42	-	150	11.85	1.15	2.33
292	9.87		0.28	2.92	200	11.21	0.41	2.73
392	8.48		0.25	3.00	250	10.53	0.29	2.85
487	7.38		0.21	3.06	300	9.76	0.27	2.93
587	6.40		0.20	3.14	400	8.38	0.25	3.00
784	5.28		0.19	3.23	500	7.26	0.20	3.08
976	4.44		0.41	3.23	600	6.31	0.20	3.14
1181	3.81		0.60	3.16	700	5.70	0.19	3.20
					800	5.22	0.19	3.24
617b)	6.32		0.20	3.08	1000	4.33	0.44	3.22
852	4.98		0.20	3.25	1200	3.76	0.63	3.16
1088	4.00		0.46	3.20	1500	2.96	1.07	3.08
1325	3.33		0.82	3.12	2000	2.16	1.84	2.83
1562	2.84		1.17	3.06	2500	1.82	2.29	2.73
1802	2.44		1.54	2.90				
2042	2.12		1.88	2.82				
2282	1.94		2.16	2.76				
2529	1.81		2.30	2.72				
2777	1.72		2.47	2.68				

a) Weather cloudy at time of deep cast.
b) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; June 9, 1951; 0700 GCT; 22°47.5'N, 110°22'W; sounding, 720 fm; wind, 320°, force 3; weather, clear; sea, missing; wire angle, 17°.								153.20
0	18.23		4.18	1.72	0	18.23	4.18	1.72
10	18.08	34.95	4.23	1.74	10	18.08	4.23	1.74
24	-		3.57	2.06	20	17.5	3.90	1.90
48	-		2.04	2.56	30	16.6	3.03	2.31
72	-		1.23	2.72	50	15.0	1.98	2.58
95	13.08		0.45	2.76	75	13.6	1.15	2.73
145	12.30		0.52	2.74	100	12.9	0.45	2.76
191	12.06		0.36	-	150	12.26	0.49	(2.74)
284	11.48		0.41	2.90	200	12.01	0.35	(2.78)
380	10.16		0.22	-	250	11.72	0.40	(2.86)
473	9.16		0.18	2.99	300	11.33	0.40	2.91
572	7.94		0.17	3.06	400	9.90	0.20	2.97
766	5.72		0.21	3.16	500	8.86	0.17	3.01
959	4.61		0.30	3.20	600	7.56	0.18	3.06
1164	3.94		0.52	3.12	700	6.32	0.19	3.12
					800	5.48	0.24	3.18
					1000	4.45	0.31	3.19
CREST; June 9, 1951; 1228 GCT; 22°28'N, 110°59.5'W; sounding, 1850 fm; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 07°.								153.30
0	20.55		4.94	0.63	0	20.55	4.94	0.63
10	20.55	34.53	4.92	0.68	10	20.55	4.92	0.68
25	-		4.86	0.76	20	20.5	4.88	0.73
49	-		3.13	1.68	30	17.5	4.80	0.84
73	-		1.02	2.52	50	15.2	3.08	1.72
97	13.44		0.43	-	75	14.7	0.90	2.53
148	12.01		1.39	2.55	100	13.1	0.42	2.56
196	11.16		0.22	-	150	11.95	0.39	2.55
289	10.01		0.13	2.94	200	11.10	0.21	2.66
388	8.66		0.12	-	250	10.46	0.15	2.84
482	7.68		0.25	3.05	300	9.88	0.12	2.95
581	6.46		0.19	3.14	400	8.53	0.12	3.01
778	5.22		0.23	3.22	500	7.48	0.29	3.06
972	4.46		0.32	3.28	600	6.31	0.18	3.15
1174	3.84		0.57	3.24	700	5.67	0.20	3.19
					800	5.13	0.25	3.23
					1000	4.37	0.35	3.28
CREST; June 9, 1951; 1733 GCT; 22°08.5'N, 111°38'W; sounding, 1800 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 37°.								153.40
0	21.20		4.97	0.78	0	21.20	4.97	0.78
8	21.20		4.90	0.72	10	21.2	4.92	0.72
20	-		5.10	0.94	20	21.1	5.10	0.94
44	-		4.65	1.27	30	20.6	5.04	1.08
64	-		2.91	2.02	50	17.2	4.39	1.42
86	14.52		0.61	2.56	75	14.5	1.55	2.46
119	12.64		0.38	2.55	100	13.2	0.49	2.56
151	12.26		0.25	2.57	150	12.27	0.26	2.57
214	11.42		0.16	2.77	200	11.65	0.16	2.72
281	10.37		0.14	2.87	250	10.84	0.14	2.83
349	9.16		0.19	2.92	300	10.05	0.16	2.88
419	8.22		0.15	2.97	400	8.47	0.15	2.95
563	6.85		0.15	-	500	7.41	0.15	(3.05)
724	5.37		0.20	3.18	600	6.51	0.16	(3.14)
907	4.50		0.40	3.18	700	5.60	0.19	(3.17)
					800	4.96	0.25	3.18

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
153.50	CREST; June 9, 1951; 2257 GCT; 21°47'N, 112°13.5'W; sounding, 1850 fm; wind, 310°, force 4; weather, partly cloudy; sea, moderate; wire angle, 32°.							
0	20.25		4.96	0.42	0	20.25	4.96	0.42
9	20.22	34.02	5.06	0.41	10	20.2	5.06	0.41
26	-		5.08	0.44	20	20.0	5.07	0.42
51	-		5.24	0.49	30	19.9	5.08	0.45
74	-		5.41	0.46	50	19.0	5.22	0.49
98	13.37		5.17	0.48	75	16.9	5.40	0.46
146	13.05		0.79	-	100	13.1	3.35	(0.49)
195	12.02		0.26	-	150	13.00	0.70	
289	10.60		0.14	2.74	200	11.94	0.24	
384	8.98		0.15	-	250	11.14	0.14	
483	7.70		0.21	2.98	300	10.45	0.15	2.77
579	6.74		0.18	3.04	400	8.75	0.15	2.89
783	5.25		0.26	3.15	500	7.50	0.21	2.99
994	4.32		0.40	3.15	600	6.56	0.19	3.06
1188	3.77		0.60	3.10	700	5.81	0.21	3.12
					800	5.15	0.26	3.15
					1000	4.31	0.41	3.15
157.10	CREST; June 11, 1951; 0441 GCT;[a] 22°33'N, 109°23'W; sounding, 1700 fm; wind, 270°, force 4; weather, clear; sea, moderate; wire angle, 10°.							
0	24.19							
10	24.18							
20	22.37							
30	19.66							
40	18.50							
49	16.24							
58	15.15							
68	14.34							
87	13.27							
106	12.83							
124	12.42							
135	12.42							
157.10	CREST; June 11, 1951; 0558 GCT;[b] 22°33'N, 109°23'W; sounding, 1670 fm; wind, 270°, force 4; weather, clear; sea, moderate; wire angle, 25°.							
626	6.50							
742	5.73							
765	5.67							
790	5.50							
814	5.34							
838	5.19							
862	5.09							
886	4.95							
910	4.82							
935	4.72							
961	4.62							

a) Bathythermograph calibration cast.
b) Test cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; June 11, 1951; 0745 GCT; 22°33'N, 109°23'W; sounding, 1750 fm; wind, 270°, force 4; weather, clear; sea, rough; wire angle, 29°.								157.10
0	24.09		4.67	0.70	0	24.09	4.67	0.70
9	24.06	35.12	4.68	0.72	10	24.1	4.69	0.72
22	-		5.10	0.70	20	19.5	5.09	0.70
48	-		0.70	2.40	30	17.9	4.50	0.84
69	-		0.46	2.56	50	15.6	0.67	2.43
93	13.43		0.23	2.66	75	14.0	0.37	2.60
136	12.46		0.15	2.72	100	13.1	0.19	2.68
180	11.72		0.24	2.47u	150	12.22	0.19	2.72
268	10.80		0.22	2.78	200	11.47	0.25	
364	9.50		0.15	2.90	250	10.97	0.23	2.76
455	8.38		0.17	-	300	10.38	0.17	2.82
549	7.20		0.16	3.12	400	9.05	0.15	2.94
738	5.74		0.19	3.24	500	7.80	0.17	3.07
936	4.71		0.28	3.22	600	6.75	0.16	3.17
1135	3.89		0.52	3.24	700	6.00	0.19	3.23
					800	5.36	0.21	3.24
					1000	4.42	0.35	3.22
CREST; June 10, 1951; 2321 GCT; 22°13'N, 110°00'W; sounding, 1800 fm; wind, 320°, force 4; weather, clear; sea, slight; wire angle, 34°.								157.20
0	22.67		4.77	0.96	0	22.67	4.77	0.96
8	22.05	35.16	4.86	0.96	10	22.0	4.90	0.96
21	-		5.01	0.92	20	21.3	5.01	0.92
45	-		3.36	1.65	30	20.5	4.99	0.95
64	-		0.73	-	50	16.8	0.99	(1.78)
85	13.62		-	-	75	14.1	0.61	(2.30)
124	12.58		0.13	2.62	100	13.2	0.34	(2.52)
164	11.91		0.33	-	150	12.14	0.29	2.67
243	10.92		0.28	2.82	200	11.45	0.29	2.75
327	9.72		0.19	2.92	250	10.81	0.27	2.83
411	8.46		0.15	2.98	300	10.12	0.22	2.90
495	7.61		0.15	3.05	400	8.60	0.15	2.97
670	5.94		0.16	3.18	500	7.56	0.15	3.06
855	5.06		0.19	3.17	600	6.61	0.15	3.14
1045	4.39		0.34	3.23	700	5.75	0.16	3.18
					800	5.29	0.17	3.17
					1000	4.51	0.28	3.20
CREST; June 10, 1951; 1754 GCT; 21°52.5'N, 110°37.5'W; sounding, 1800 fm; wind, 310°, force 4; weather, clear; sea, moderate; wire angle, 15°.								157.30
0	21.02		4.95	0.43	0	21.02	4.95	0.43
10	20.90		4.90	0.44	10	20.90	4.90	0.44
24	-		4.70	0.59	20	20.9	4.73	0.49
53	-		5.12	0.60	30	20.3	4.73	0.62
76	-		2.66	1.67	50	17.3	5.11	0.60
104	13.44		0.86	2.42	75	14.1	2.75	1.64
153	12.12		0.40	2.58	100	13.5	0.94	2.40
202	11.43		0.18	2.67	150	12.17	0.41	2.57
300	10.06		0.17	2.86	200	11.46	0.18	2.67
405	8.51		0.19	2.98	250	10.72	0.17	2.78
504	7.30		0.21	3.05	300	10.06	0.17	2.86
604	6.45		0.15	3.13	400	8.60	0.20	2.98
803	5.34		0.22	3.18	500	7.34	0.20	3.04
1007	4.48		0.34	3.22	600	6.48	0.15	3.13
1208	3.82		0.57	3.15	700	5.87	0.16	3.15
					800	5.36	0.21	3.18
					1000	4.50	0.35	3.22
					1200	3.85	0.56	3.16

S10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

157.40 CREST; June 10, 1951; 1129 GCT;[a] 21°32.5'N, 111°14.5'W; sounding, 1800 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 04°.

0	21.43							
10	21.44							
20	21.36							
30	18.09							
40	15.06							
50	13.14							
60	12.19							
69	12.30							
88	12.94							
108	12.92							
126	12.73							
137	12.50							

157.40 CREST; June 10, 1951; 1304 GCT; 21°32.5'N, 111°14.5'W; sounding, 1800 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 12°.

0	21.54		4.86	0.68	0	21.54	4.86	0.68
10	21.56b)		4.81	0.70	10	21.56	4.81	0.70
25	-		5.02	0.74	20	21.6	5.01	0.72
49	-		3.59	1.53	30	21.1	4.99	0.81
73	-		3.16	1.60	50	17.6	3.55	1.53
96	12.74		1.84	2.03	75	12.7	3.10	1.65
147	12.41		0.90	-	100	12.8	1.70	
194	11.36		0.21	-	150	12.35	0.85	
286	9.98		0.17	2.86	200	11.25	0.20	
383	8.68		0.16	2.92	250	10.48	0.19	
476	7.40		0.18	3.04	300	9.77	0.17	2.86
573	6.56		0.16	3.12	400	8.45	0.16	2.94
766	5.28		0.29	3.18	500	7.18	0.19	3.06
959	4.52		0.38	3.20	600	6.35	0.16	3.14
1161	3.88		1.33u	3.21	700	5.69	0.23	3.17
					800	5.12	0.32	3.19
					1000	4.37	(0.36)	3.20

157.50 CREST; June 10, 1951; 0433 GCT; 21°12.5'N, 111°52'W; sounding, 1800 fm; wind, 330°, force 4; weather, clear; sea, moderate; wire angle, 11°.

0	20.18		4.97	0.38	0	20.18	4.97	0.38
10	20.19	33.96	4.98	0.39	10	20.19	4.98	0.39
25	-		4.97	0.41	20	20.2	4.97	0.40
53	-		5.40	0.42	30	20.0	5.00	0.41
77	-		5.16	0.84	50	18.4	5.39	0.42
105	12.94		2.73	1.59	75	14.8	5.19	0.76
156	12.20		1.86	-	100	12.9	3.11	1.49
207	11.56		0.22	-	150	12.29	1.96	
308	10.23		0.18	2.82	200	11.65	0.31	
416	8.76		0.18	2.91	250	11.04	0.19	
517	7.40		0.16	-	300	10.35	0.19	(2.81)
621	6.38		0.14	3.10	400	8.97	0.19	2.90
823	5.19		0.21	3.22	500	7.64	0.17	2.99
1030	4.31		0.42	3.19	600	6.53	0.14	3.08
1231	3.70		0.64	3.16	700	5.86	0.16	3.17
					800	5.31	0.20	3.22
					1000	4.42	0.39	3.20
					1200	3.78	0.61	3.16

a) Bathythermograph calibration cast.
b) Alternate value, 21.44°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; June 10, 1951; 0630 GCT;[a] 21°12.5'N, 111°52'W; sounding, 1850 fm; wind, 310°, force 4; weather, clear; sea, moderate; wire angle, 12°.

655	6.18
773	5.35
797	5.25
821	5.12
845	5.00
869	4.90
892	4.82
917	4.68
941	4.56
966	4.48
992	4.40

a) Test cast.

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OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
40.45	BLACK DOUGLAS; July 18, 1951; 2359 GCT; 41°33'N, 125°00'W; sounding, 740 fm; wind, 330°, force 5; weather, clear; sea, rough; wire angle, 02°.									
0	-	-	5.49	0	12.8	(33.07)	5.49	(25.10)	(288)	(0.00)
10	10.45	33.07	5.35	10	10.45	33.07	5.35	25.39	259	0.03
25	-	33.28E	4.23	20	10.2	33.22	4.75	25.55	244	0.05
50	-	33.51E	2.69u	30	10.0	33.32		25.66	234	0.08
75	-	33.84E	2.95	50	9.0	33.51		25.97	204	0.12
99	8.52	33.87E	2.66	75	8.8	33.84	2.95	26.27	176	0.17
152	8.06	33.98E	2.00	100	8.51	33.87	2.65	26.33	170	0.21
200	7.70	-	1.47	150	8.07	33.98	2.04	26.48	156	0.30
295	6.97	34.13E	1.23	200	7.70	34.04	1.47	26.58	146	0.37
394	6.50	-	0.88	250	7.29	34.09	1.30	26.68	137	0.44
488	5.77	34.22E	0.61	300	6.94	34.13	1.21	26.76	129	0.51
587	5.12	34.27E	0.41	400	6.46	34.18	0.87	26.87	119	0.64
779	4.22	34.36E	0.28	500	5.70	34.23	0.58	27.01	106	0.76
970	3.70	34.52E	0.46	600	5.05	34.28	0.39	27.12	95	0.86
1170	3.14	34.51E	0.66	700	4.56	34.32	0.29	27.21	87	0.96
				800	4.14	34.38	0.28	27.30	78	1.05
				1000	3.62	34.52	0.50	27.46	63	1.20
40.50	BLACK DOUGLAS; July 18, 1951; 1845 GCT; 41°23'N, 125°23'W; sounding, 1710 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 09°.									
12	14.26	32.94	6.04	0	14.4	(32.94)		(24.54)	(341)	(0.00)
26	-	33.13E	5.21	10	14.3	(32.94)		(24.55)	(339)	(0.03)
50	-	33.42E	4.69	20	12.2	33.05	5.44	25.06	291	0.07
75	-	33.51E	3.90	30	11.8	33.20	5.10	25.25	273	0.09
99	7.61	33.80E	3.36	50	9.6	33.42	4.69	25.81	220	0.14
149	7.36	-	2.47	75	8.2	33.51	3.90	26.09	193	0.19
195	6.90	33.95E	2.05	100	7.60	33.80	3.34	26.41	163	0.24
286	6.32	34.04E	1.46	150	7.35	33.82	2.45	26.47	157	0.32
381	5.59	-	0.95	200	6.85	33.96	2.02	26.65	141	0.40
473	5.11	-	0.66	250	6.51	34.01	1.69	26.73	132	0.47
569	4.74	-	0.41	300	6.24	(34.05)	1.38	(26.79)	(126)	(0.53)
761	4.18	34.34E	0.30	400	5.47		0.88			
951	3.66	34.45E	0.38	500	4.99		0.58			
1150	3.16	-	0.41	600	4.65		0.36			
				700	4.35		0.31			
				800	4.07		0.30			
				1000	3.53		0.40			

40.50 BLACK DOUGLAS; July 18, 1951; 2005 GCT;[a] 41°23'N, 125°23'W; sounding, 1710 fm; wind, 330°, force 3; weather, partly cloudy; sea, moderate; wire angle, 02°.

0	14.53
14	14.04
28	11.25
42	10.22
55	8.61
68	8.05
81	7.62
94	7.40
107	7.56
120	7.44
134	7.25

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Black Douglas samples on Cruise 5107, it is estimated that the mean effect of evaporation was 0.060‰, with standard deviation of 0.060‰.

a) Bathythermograph calibration cast.

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

BLACK DOUGLAS; July 18, 1951; 0952, 1150 GCT; 41°03'N, 126°09'W; sounding, 1730 fm; wind, 360°, force 2; weather, cloudy; sea, slight; wire angle, 35°, 07°. 40.60

0	-	32.83E	5.16	0	15.4	32.83	5.16	24.01	391	0.00
8	13.24	32.68	5.11	10	13.0	32.68	5.11	24.62	333	0.04
20	-	32.90E	6.03	20	12.0	32.90	6.03	24.98	298	0.07
44	-	33.33E	5.18	30	11.8	33.08	5.95	25.16	282	0.10
63	-	33.62E	4.48	50	10.2	33.43	4.93	25.71	229	0.15
85	8.26	33.66E	3.78	75	8.7	33.65	4.09	26.13	189	0.20
124	7.64	33.89E	2.72	100	7.95	33.72	3.34	26.30	173	0.25
162	7.22	33.95E	2.46	150	7.34	33.93	2.52	26.55	149	0.33
239	6.79	34.02E	1.79	200	6.97	33.98	2.21	26.64	141	0.40
321	-	34.16E	1.30	250	6.76	34.03	1.67	26.71	134	0.47
398	5.57	34.13E	0.95	300	6.53	34.14	1.39	26.83	123	0.54
465	5.19	34.16E	0.67	400	5.55	34.13	0.93	26.94	112	0.66
626	4.62	34.25E	0.35	500	5.06	34.18	0.56	27.04	103	0.77
787	4.06	34.36E	0.32	600	4.70	34.23	0.38	27.12	95	0.88
973	3.66	34.43E	0.43	700	4.34	34.30	0.32	27.22	86	0.97
				800	4.02	34.36	0.32	27.30	79	1.06
615a)	4.62	34.25E	0.41	1000	3.60	34.43	0.46	27.40	69	1.22
991	3.72	34.42E	0.42	1200	3.13	34.42	0.67	27.43	66	1.37
1180	3.18	34.42E	0.65	1500	2.50	34.55	0.89	27.59	51	1.57
1463	2.57	34.54E	0.85	2000	1.92	34.58	1.55	27.67	44	1.85
1700	-	34.58E	1.15	2500	1.74	34.63	1.93	27.72	39	2.10
1936	1.98	34.58E	1.47							
2176	1.82	34.60E	1.71							
2417	1.76	34.63E	1.88							
2660	1.72	34.63E	2.02							
2907	1.69	34.61E	1.18u							

BLACK DOUGLAS; July 18, 1951; 0409 GCT; 40°42'N, 126°55'W; sounding, 1620 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 07°. 40.70

0	-	32.17E	5.23	0	17.2	32.17	5.23	23.32	457	0.00
10	15.54	-	4.99	10	15.54	32.14	4.99	23.67	423	0.04
25	-	32.25	4.90	20	14.6	32.25	4.92	23.96	396	0.08
50	-	32.21E	4.74	30	14.3	32.24	4.87	24.02	390	0.12
74	-	32.59E	5.14	50	12.3	32.21	4.74	24.39	355	0.20
98	9.89	32.79E	4.99	75	11.0	32.60	5.14	24.93	303	0.28
149	8.89	33.26E	4.46	100	9.82	32.82	4.96	25.30	268	0.35
196	8.46	33.60E	3.87	150	8.89	33.28	4.45	25.81	220	0.48
290	7.26	33.93E	2.32	200	8.42	33.62	3.79	26.15	188	0.58
387	6.25	34.05E	1.55	250	7.83	33.83	2.83	26.40	164	0.67
481	5.50	34.13E	0.92	300	7.15	33.94	2.24	26.58	146	0.75
580	4.67	34.13E	0.83	400	6.14	34.06	1.45	26.82	124	0.89
				500	5.32	34.13	0.88	26.97	109	1.02
				600	(4.60)	(34.14)		(27.07)	(101)	(1.13)

a) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

40.80 BLACK DOUGLAS; July 17, 1951; 2214 GCT; 40°23'N, 127°40'W; sounding, 880 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 03°.

0	-	32.41E	3.89	0	17.0		3.89			
10	15.00	32.43	4.13	10	15.00		4.13			
25	-	-	3.98	20	13.9		3.99			
49	-	-	4.41	30	13.2		3.98			
73	-	32.72E	2.96u	50	10.3		4.41			
97	8.55	-	3.74	75	9.1					
149	7.92	34.33E	2.47u	100	8.49					
196	7.26	-	2.62	150	7.91					
289	6.54	-	1.41	200	7.22		2.56			
387	5.76	34.25E	0.78	250	6.80		1.86			
481	5.07	-	0.46	300	6.46		1.32			
580	4.66	-	0.30	400	5.65		0.72			
773	4.03	34.34E	0.18	500	4.98		0.43			
965	3.49	34.43E	0.28	600	4.59		0.27			
1167	3.06	34.49E	0.36	700	4.27		0.19			
				800	3.93		0.17			
				1000	3.41		0.30			

40.90 BLACK DOUGLAS; July 17, 1951; 1606 GCT; 40°02'N, 128°25'W; sounding, 2480 fm; wind, calm; weather, drizzle; sea, moderate; wire angle, 03°.

0	-	32.66E	5.37	0	16.0		5.37			
10	15.06	32.56	5.31	10	15.06		5.31			
25	-	-	5.49	20	14.4		5.43			
49	-	-	5.56	30	14.3		5.50			
73	-	-	5.69	50	13.5		5.57			
97	9.24	34.29E	5.72	75	9.5		5.71			
148	8.13	34.29E	4.87	100	9.02		5.71			
194	7.56	-	4.00	150	8.09		4.84			
287	6.57	34.11E	2.66	200	7.49		3.89			
383	5.65	34.07E	1.43	250	6.95		3.15			
476	4.96	34.11E	0.99	300	6.44		2.48			
574	4.41	-	0.80	400	5.51		1.30			
765	4.02	-	0.32	500	4.81		0.94			
958	3.54	34.42E	0.35	600	4.32		0.74			
1160	3.10	-	0.63	700	4.12		0.45			
				800	3.95		0.32			
				1000	3.43		0.39			

40.100 BLACK DOUGLAS; July 17, 1951; 0859 GCT; 39°42'N, 129°10'W; sounding, 2460 fm; wind, 220°, force 1; weather, clear; sea, moderate; wire angle, 11°.

0	-	32.67E	5.35	0	17.6	32.67	5.35	23.61	429	0.00
10	15.80	32.72	5.30	10	15.80	32.72	5.30	24.06	386	0.04
24	-	32.77E	5.14	20	15.5	32.75	5.16	24.15	377	0.08
48	-	32.83E	5.74	30	15.5	32.78	5.16	24.17	375	0.17
71	-	32.88E	5.62	50	12.1	32.83	5.73	24.91	305	0.18
94	9.80	32.86E	5.23	75	10.6	32.88	5.57	25.22	276	0.26
145	8.68	33.21E	4.55	100	9.75	32.87	5.14	25.36	263	0.33
191	7.77	-	3.98	150	8.57	33.25	4.48	25.84	217	0.45
284	6.68	33.98E	3.19	200	7.62	33.64	3.88	26.28	175	0.55
381	5.66	34.02E	1.94	250	7.04	33.90	3.47	26.57	148	0.63
474	5.02	34.07E	1.27	300	6.50	33.99	3.03	26.72	134	0.70
572	4.48	34.13E	0.79	400	5.51	34.03	1.79	26.88	119	0.84
764	3.96	34.27E	0.33	500	4.87	34.08	1.12	26.98	108	0.95
954	3.50	34.43E	0.41	600	4.37	34.15	0.69	27.09	198	1.06
1155	3.04	34.36uE	0.41	700	4.10	34.22	0.40	27.18	90	1.16
				800	3.87	34.30	0.33	27.26	82	1.26
				1000	3.39	(34.46)	0.42	(27.44)	(65)	(1.42)

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^5 cm^3/g$	dyn. m

BLACK DOUGLAS; July 17, 1951; 1028 GCT;[a] 39°42'N, 129°10'W; sounding, 2460 fm; wind, 220°, force 1; weather, clear; sea, moderate; wire angle, 07°. 40.100

651	-	34.20E	0.43
674	4.10	34.27E	0.48
698	-	-	0.46
722	-	-	0.41
746	-	-	0.45
770	3.92	-	0.32
794	3.86	-	0.32
819	3.78	34.31E	0.34
843	3.73	34.23E	0.33
867	3.70	34.36E	0.31
891	3.64	-	0.36
916	3.54	-	0.32
940	3.50	34.34E	0.34
965	3.44	34.42E	0.36
990	3.38	-	0.37

BLACK DOUGLAS; July 17, 1951; 0041, 0242 GCT; 39°23'N, 129°55'W; sounding, 2540 fm; wind, 220°, force 1; weather, partly cloudy; sea, slight; wire angle, 10°, 08°. 40.110

0	-	32.66E	3.38	0	18.0	32.66	3.38	23.50	439	0.00
10	16.42	32.74	3.90	10	16.42	32.74	3.90	23.94	398	0.04
24	-	32.68E	4.19	20	15.5	32.69	4.12	24.10	382	0.08
48	-	32.84E	4.19	30	15.3	32.70	4.19	24.15	377	0.12
72	-	32.86E	4.07	50	12.0	32.84	4.18	24.94	303	0.19
96	10.30	32.86E	4.36	75	11.2	32.86	4.06	25.10	287	0.26
146	8.64	33.04E	3.28	100	10.05	32.86	4.36	25.30	269	0.33
192	7.95	33.53E	3.05	150	8.58	33.08	3.25	25.70	230	0.46
282	6.71	33.89E	2.01	200	7.80	33.60	2.99	26.23	180	0.56
376	5.82	33.93E	1.26	250	7.06	33.82	2.40	26.51	154	0.65
466	5.10	34.07E	0.92	300	6.52	33.90	1.85	26.64	141	0.72
560	4.76	34.18E	0.56	400	5.60	33.96	1.14	26.81	125	0.86
745	3.90	34.25E	0.25	500	4.95	34.12	0.77	27.01	106	0.98
929	3.52	-	0.30	600	4.64	34.20	0.47	27.10	97	1.09
1127	3.08	-	0.27u	700	4.14	34.23	0.29	27.18	89	1.19
				800	3.74	(34.28)	0.25	(27.26)	(82)	(1.28)
604b)	4.63	-	0.58	1000	3.37	(34.42)	0.37	(27.41)	(68)	(1.45)
973	3.50	34.47uE	0.36	1200	2.95	34.48	0.50	27.50	59	(1.59)
1158	3.05	34.47E	0.46	1500	2.51	34.57	0.90	27.61	49	(1.78)
1436	2.62	34.55E	0.81	2000	1.95	34.64	1.46	27.71	39	(2.04)
1669	2.26	34.61E	1.10	2500	1.70	34.68	2.00	27.76	35	(2.27)
1905	2.01	34.63E	1.34							
2141	1.87	34.66E	1.64							
2381	1.75	34.63E	1.83							
2622	1.68	34.68E	2.20							
2870	1.61	34.69E	2.29							

a) Test cast.
b) Overlapping casts; reconciliation of property curves when necessary.

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_{T_3}	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

43.60 BLACK DOUGLAS; July 19, 1951; 1416 GCT; 40°28'N, 125°43'W; sounding, 1620 fm; wind, 340°, force 7; weather, partly cloudy; sea, very rough; wire angle, 12°.

0	-	32.38E	4.18	0	14.2		4.18			
10	14.15	32.34	4.08	10	14.15		4.08			
25	-	-	3.71	20	13.8		3.74			
48	-	-	4.24	30	12.3		3.72			
71	-	-	4.00	50	11.5		4.24			
94	8.62	32.81E	4.07	75	9.4		4.01			
143	7.66	34.22E	3.01	100	8.47		4.07			
187	7.45	-	2.10	150	7.59		2.83			
277	6.57	33.80E	1.25	200	7.38		1.93			
372	5.83	-	0.88	250	6.90		1.45			
463	5.32	-	0.71	300	6.36		1.13			
559	4.87	-	0.37	400	5.66		0.83			
749	4.20	34.36E	0.28	500	5.14		0.56			
938	3.76	34.47E	0.31	600	4.71		0.32			
1137	3.24	34.51E	0.42	700	4.36		0.28			
				800	4.06		0.28			
				1000	3.62		0.35			

47.55 BLACK DOUGLAS; July 20, 1951; 0052 GCT; 40°04'N, 124°55'W; sounding, 660 fm; wind, 340°, force 7; weather, clear; sea, high; wire angle, 04°.

0	-	-	4.85	0	12.8	(32.76)		(24.72)	(323)	(0.00)
10	12.55	32.76	3.14	10	12.55	32.76	3.14	24.77	319	0.03
25	-	33.15E	3.07	20	11.3	33.07	3.09	25.24	274	0.06
50	-	33.37E	3.56	30	10.3	33.19	3.07	25.51	248	0.09
74	-	33.71E	2.65	50	10.3	33.37	3.56	25.65	235	0.14
98	9.39	33.80E	2.61	75	9.7	33.71	2.64	26.02	200	0.19
151	8.15	33.99E	1.67	100	9.35	33.81	2.61	26.15	187	0.24
198	7.50	34.09E	1.39	150	8.19	33.99	1.68	26.47	157	0.33
292	6.69	34.13E	0.84	200	7.49	34.09	1.37	26.65	140	0.40
392	6.19	34.22E	0.65	250	7.02	34.12	1.10	26.74	131	0.47
487	5.48	34.18E	0.48	300	6.64	34.14	0.80	26.81	125	0.54
585	5.10	34.25E	0.39	400	6.14	34.22	0.63	26.94	112	0.66
679	4.84	34.34E	0.29	500	5.40	34.19	0.46	27.01	106	0.77
779	4.44	34.36E	0.33	600	5.05	34.32	0.37	27.15	92	0.88
971	3.80	34.43E	0.34	700	4.76	34.35	0.30	27.21	86	0.97
				800	4.35	34.37	0.35	27.27	81	1.06
				1000	(3.73)	(34.44)	(0.34)	(27.39)	(70)	(1.23)

47.60 BLACK DOUGLAS; July 19, 1951; 2017 GCT; 39°54'N, 125°18'W; sounding, 1540 fm; wind, 330°, force 7; weather, partly cloudy; sea, high; wire angle, 09°.

0	-	33.10E	5.92	0	12.4	33.10	5.92	25.06	291	0.00
10	12.32	33.06	5.71	10	12.32	33.06	5.71	25.04	293	0.03
25	-	33.19E	5.98	20	12.1	33.16	5.94	25.16	281	0.06
49	-	33.25E	5.72	30	11.2	33.20	5.96	25.36	262	0.09
73	-	33.44E	4.61	50	10.7	33.26	5.66	25.50	249	0.14
97	8.89	33.42E	4.54	75	9.5	33.43	4.60	25.83	218	0.19
148	7.88	33.77E	2.93	100	8.80	33.43	4.53	25.94	207	0.25
195	7.60	33.95E	2.76	150	7.85	33.77	2.91	26.36	168	0.34
286	6.61	34.09E	1.97	200	7.57	33.96	2.73	26.54	150	0.42
382	5.76	34.13E	1.32	250	7.07	34.06	2.24	26.69	136	0.50
473	5.16	34.14E	0.85	300	6.47	34.10	1.86	26.80	125	0.56
571	4.73	-	0.57	400	5.63	34.13	1.21	26.93	113	0.69
761	4.18	34.34E	0.36	500	5.02	(34.15)	0.75	(27.02)	(105)	(0.80)
951	3.69	34.45E	0.45	600	4.62	(34.20)	0.52	(27.11)	(97)	(0.91)
1153	3.24	34.52E	0.58	700	4.34	(34.29)	0.38	(27.21)	(87)	(1.00)
				800	4.09	34.36	0.36	27.29	79	(1.09)
				1000	3.57	34.47	0.50	27.43	65	(1.25)

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

BLACK DOUGLAS; July 14, 1951; 1921 GCT;[a] 39°30'N, 124°30'W; sounding, 1080 fm; wind, 330°, force 3; weather, fog; sea, rough; wire angle, 09°. 50.55

0	10.46									
14	10.25									
28	10.19									
41	9.72									
54	8.74									
67	8.53									
80	8.38									
92	8.19									
105	8.10									
117	8.02									
129	7.98									

BLACK DOUGLAS; July 14, 1951; 2039 GCT; 39°30'N, 124°30'W; sounding, 1080 fm; wind, 330°, force 3; weather, fog; sea, rough; wire angle, 03°. 50.55

0	-	-	4.51	0	10.5	(33.62)	4.51	(25.81)	(220)	(0.00)
10	10.45	38.62	4.12	10	10.45	33.62	4.12	25.82	219	0.02
25	-	33.71E	3.63	20	10.2	33.70	3.69	25.92	209	0.04
49	-	33.71E	3.56	30	10.1	33.71	3.61	25.95	207	0.06
73	-	33.75E	2.33	50	9.8	33.71	3.56	26.00	202	0.10
97	8.24	-	2.29	75	8.7	33.76	2.33	26.09	193	0.15
149	7.98	34.05E	2.10	100	8.20	33.88	2.29	26.39	165	0.20
195	7.74	34.14E	1.71	150	7.98	34.05	2.09	26.56	149	0.28
286	7.00	34.13E	1.36	200	7.69	34.14	1.68	26.67	138	0.35
381	6.38	-	0.95	250	7.30	34.13	1.49	26.72	134	0.42
471	5.64	34.23E	0.70	300	6.89		1.29			
568	5.64	-	0.40	400	6.21		0.89			
756	4.50	-	0.27	500	5.63		0.61			
945	3.96	34.47E	0.40	600	5.52		0.35			
1147	3.38	34.54E	0.55	700	4.90		0.27			
				800	4.34		0.28			
				1000	3.82		0.45			

BLACK DOUGLAS; July 15, 1951; 0010 GCT; 39°20'N, 124°52'W; sounding, 1620 fm; wind, 320°, force 1; weather, fog; sea, slight; wire angle, 14°. 50.60

0	-	33.66E	5.09	0	12.0	33.66	5.09	25.57	242	0.00
10	10.64	33.51	5.28	10	10.64	33.51	5.28	25.70	230	0.02
24	-	-	4.57	20	9.7	33.58	5.15	25.91	210	0.05
48	-	33.85E	4.40	30	9.8	33.72	4.52	26.01	201	0.07
71	-	33.84E	3.93	50	9.6	33.85	4.37	26.14	188	0.10
94	8.72	33.96E	2.74	75	8.9	33.85	3.63	26.26	177	0.15
142	8.35	34.08E	2.14	100	8.65	33.98	2.63	26.40	164	0.20
187	8.01	34.16E	1.71	150	8.28	34.10	2.06	26.55	150	0.27
371	6.48	34.22E	0.91	200	7.93	34.18	1.59	26.66	139	0.35
460	5.91	34.30E	0.61	250	7.59	34.20	1.29	26.73	133	0.42
554	5.15	-	0.37	300	7.14	34.20	1.12	26.79	127	0.48
739	4.52	-	0.34	400	6.27	34.24	0.82	26.94	113	0.60
923	3.93	34.51E	0.40	500	5.58	(34.35)	0.49	(27.12)	(96)	(0.71)
1119	3.36	34.51E	0.60	600	4.96		0.35			
				700	4.64		0.35			
				800	4.32		0.35			
				1000	3.70		0.46			

a) Bathythermograph calibration cast.

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OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} 10^{-5} cm^3/g	ΔD dyn. m
50.70	BLACK DOUGLAS; July 15, 1951; 0705 GCT; 39°00'N, 125°36.5'W; sounding, 2100 fm; wind, calm; weather, fog; sea, slight; wire angle, 36°.									
0	-	32.74E	3.57	0	13.8	32.74	3.57	24.51	344	0.00
8	11.90	32.74	4.13	10	11.9	32.74	4.30	24.88	309	0.03
20	-	32.86E	4.70	20	11.4	32.86	4.70	25.06	291	0.06
41	-	-	3.26	30	10.5	32.93	3.53	25.27	271	0.09
61	-	33.19E	3.21	50	9.3	33.09	3.22	25.60	240	0.14
80	8.96	33.60E	2.88	75	9.1	33.47	3.09	25.93	209	0.20
119	8.46	33.82E	2.22	100	8.78	33.73	2.51	26.18	184	0.25
152	8.28	33.94E	1.67	150	8.28	33.93	1.69	26.41	163	0.34
214	7.72	34.07E	1.49	200	7.85	34.06	1.54	26.58	147	0.41
278	6.94	34.09E	1.00	250	7.29	34.09	1.21	26.68	137	0.49
342	5.98	34.00E	1.21	300	6.58	34.05	1.01	26.76	130	0.55
410	5.44	34.07E	0.83	400	5.51	34.05	0.87	26.89	117	0.68
549	5.18	34.27E	0.37	500	5.24	34.21	0.48	27.04	103	0.80
696	4.51	34.34E	0.30	600	4.99	34.30	0.33	27.15	93	0.90
872	3.99	34.42E	0.31	700	4.50	34.34	0.30	27.23	85	0.99
				800	4.18	34.39	0.31	27.31	78	1.08
50.80	BLACK DOUGLAS; July 15, 1951; 1248 GCT; 38°40'N, 126°21'W; sounding, 2300 fm; wind, 310°, force 1; weather, drizzle; sea, slight; wire angle, 07°.									
0	-	32.90E	4.79	0	12.6	32.90	4.79	24.87	309	0.00
10	11.60	32.84	5.20	10	11.60	32.84	5.20	25.01	296	0.03
25	-	33.13E	4.89	20	11.7	33.02	5.05	25.13	284	0.06
50	-	32.90E	4.30	30	11.6	33.12	4.73	25.23	275	0.09
74	-	33.08E	4.34	50	10.0	32.90	4.30	25.34	265	0.14
98	9.14	33.40E	4.21	75	9.8	33.09	4.34	25.52	248	0.21
150	8.36	33.80E	2.54	100	9.05	33.43	4.17	25.90	211	0.26
197	7.74	33.91E	2.12	150	8.36	33.80	2.54	26.30	173	0.36
288	6.42	34.02E	2.05	200	7.68	33.91	2.10	26.48	156	0.44
383	5.76	34.14E	1.08	250	6.87	33.97	1.78	26.65	140	0.52
473	5.08	34.14E	0.78	300	6.32	34.03	1.50	26.77	128	0.59
570	4.76	34.18E	0.42	400	5.64	34.14	1.01	26.94	112	0.71
				500	4.97	34.15	0.68	27.03	104	0.83
50.90	BLACK DOUGLAS; July 15, 1951; 1839 GCT;[a] 38°20'N, 127°05'W; sounding, 2500 fm; wind, 300°, force 1; weather, light fog; sea, slight; wire angle, 02°.									
0	14.74									
14	13.96									
28	12.70									
42	12.06									
55	11.72									
68	11.57									
81	10.06									
94	10.00									
106	9.54									
118	8.92									
130	8.12									

a) Bathythermograph calibration cast.

OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

BLACK DOUGLAS; July 15, 1951; 2005, 2039 GCT; 38°20'N, 127°05'W; sounding, 2500 fm; wind, calm; weather, light fog; sea, slight; wire angle, 05°, missing. 50.90

0	-	32.65E	5.78	0	14.7	32.65	5.78	24.25	368	0.00
10	14.25	32.63	5.78	10	14.25	32.63	5.78	24.33	361	0.04
25	-	32.86E	5.79	20	13.0	32.84	5.78	24.75	321	0.07
49	-	32.79E	5.91	30	12.7	32.85	5.80	24.81	315	0.10
73	-	32.77E	5.54	50	11.9	32.79	5.90	24.92	305	0.16
96	9.66	33.01E	5.33	75	10.2	32.77	5.50	25.20	278	0.24
147	7.93	33.42E	4.31	100	9.35	33.04	5.29	25.55	244	0.30
193	7.51	33.86E	3.65	150	7.89	33.45	4.27	26.09	192	0.42
286	6.45	33.98E	2.15	200	7.45	33.88	3.55	26.50	154	0.50
383	5.57	34.05E	1.16	250	6.89	33.95	2.76	26.63	142	0.58
476	5.34	34.18E	0.64	300	6.30	33.99	1.98	26.75	131	0.65
574	4.90	34.27E	0.41	400	5.50	34.07	1.04	26.91	116	0.78
				500	5.26	34.20	0.57	27.04	104	0.89
766	4.18	34.33E	0.29	600	4.78	34.28	0.38	27.15	92	1.00
954	3.67	34.42E	0.44	700	4.40	34.31	0.31	27.22	86	1.09
1154	3.26	34.56E	0.66	800	4.07	34.35	0.30	27.28	80	1.18
				1000	3.58	34.45	0.51	27.41	67	1.34

BLACK DOUGLAS; July 16, 1951; 0218 GCT; 38°00'N, 127°49'W; sounding, 2540 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 01°. 50.100

0	-	32.61E	5.26	0	16.0	32.61	5.26	23.94	398	0.00
10	14.32	32.66	5.69	10	14.32	32.66	5.69	24.34	360	0.04
25	-	32.66E	5.43	20	13.8	32.66	5.43	24.44	349	0.07
50	-	32.68E	5.75	30	13.7	32.66	5.45	24.46	348	0.11
74	-	32.72E	5.18	50	12.2	32.68	5.75	24.77	318	0.17
98	9.48	32.77E	5.63	75	9.8	32.72	5.18	25.23	275	0.25
151	8.33	33.12E	4.49	100	9.42	32.78	5.62	25.34	265	0.32
199	7.86	33.66E	3.56	150	8.35	33.12	4.52	25.77	223	0.44
292	6.61	33.94E	2.86	200	7.84	33.67	3.55	26.28	175	0.54
390	5.53	33.98E	1.81	250	7.20	33.87	3.13	26.53	152	0.63
483	4.81	34.04E	1.20	300	6.50	33.94	2.80	26.68	137	0.70
581	4.32	34.16E	0.71	400	5.44	33.98	1.73	26.84	122	0.84
774	3.98	34.36E	0.34	500	4.70	34.06	1.10	26.99	108	0.96
966	3.50	34.45E	0.39	600	4.26	34.18	0.64	27.13	94	1.06
1166	3.14	34.52E	0.74	700	4.07	34.29	0.39	27.23	84	1.16
				800	3.93	34.37	0.35	27.32	77	1.25
				1000	3.42	34.46	0.43	27.44	65	1.40

BLACK DOUGLAS; July 16, 1951; 0811 GCT; 37°40'N, 128°33'W; sounding, 2560 fm; wind, calm; weather, fog; sea, moderate; wire angle, 00°. 50.110

0	-	32.86E	4.51	0	16.7	32.86	4.51	23.97	395	0.00
10	15.96	32.84	4.28	10	15.96	32.84	4.28	24.12	380	0.04
25	-	32.84E	5.05	20	15.3	32.84	5.01	24.27	367	0.08
50	-	32.81E	4.90	30	15.2	32.84	5.04	24.29	364	0.11
74	-	32.86E	5.21	50	14.6	32.81	4.90	24.39	354	0.18
98	10.68	32.73E	4.67	75	12.4	32.86	5.20	24.87	309	0.27
151	8.86	33.13E	4.02	100	10.61	32.73	4.61	25.10	287	0.34
199	8.46	33.62E	3.04	150	8.89	33.11	4.04	25.68	232	0.48
291	7.29	33.91E	2.29	200	8.45	33.62	3.02	26.14	188	0.58
389	6.32	33.98E	1.67	250	7.87	33.83	2.59	26.40	164	0.67
482	5.34	34.00E	1.24	300	7.17	33.92	2.24	26.57	148	0.75
580	4.75	34.06E	0.73	400	6.20	33.98	1.60	26.75	131	0.90
774	4.26	34.27E	0.36	500	5.22	34.01	1.15	26.89	117	1.03
966	3.67	34.34E	0.37	600	4.67	34.08	0.67	27.01	106	1.15
1167	3.22	34.42E	0.68	700	4.41	34.19	0.43	27.04	103	1.26
				800	4.18	34.28	0.36	27.22	86	1.36
				1000	3.57	34.35	0.40	27.34	75	1.54

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OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

53.64 BLACK DOUGLAS; July 14, 1951; 0625 GCT; 38°38'N, 124°44'W; sounding, 2060 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 19°.

0	-	33.13E	5.69	0	12.8	33.13	5.69	25.01	296	0.00
9	12.74	33.15	5.38	10	12.7	33.16	5.38	25.05	292	0.03
23	-	33.30E	5.53	20	12.7	33.29	5.53	25.15	283	0.06
47	-	33.22E	5.25	30	12.4	33.29	5.49	25.20	277	0.09
70	-	33.35E	4.57	50	10.5	33.22	5.17	25.50	249	0.14
93	9.19	33.60E	4.03	75	9.7	33.42	4.45	25.79	221	0.20
142	7.93	33.86E	2.99	100	8.98	33.66	3.89	26.09	193	0.25
186	7.43	33.91E	2.76	150	7.82	33.87	2.93	26.44	160	0.34
271	6.42	33.95E	2.32	200	7.27	33.92	2.70	26.55	149	0.42
362	5.82	34.09E	1.12	250	6.65	33.94	2.46	26.66	139	0.49
449	5.28	34.18E	0.77	300	6.20	33.99	1.95	26.74	131	0.56
542	4.90	34.27E	0.48	400	5.57	34.13	0.95	26.95	112	0.69
725	4.04	34.33E	0.34	500	5.06	34.23	0.60	27.08	99	0.80
912	3.79	34.45E	0.43	600	4.63	34.29	0.42	27.17	90	0.90
1110	3.34	-	0.60	700	4.13	34.32	0.35	27.26	83	0.99
				800	3.91	34.38	0.37	27.33	76	1.07
				1000	3.62	(34.47)	0.53	(27.43)	(67)	(1.23)

57.54 BLACK DOUGLAS; July 13, 1951; 1701 GCT; 38°24'N, 123°35'W; sounding, 130 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 05°.

0	-	33.73E	3.51	0	9.7	33.73	3.51	25.03	198	0.00
10	9.66	33.58	3.33	10	9.66	33.58	3.33	25.92	209	0.02
25	-	33.69E	2.91	20	9.7	33.68	2.91	26.00	202	0.04
48	-	33.68E	3.50	30	9.7	33.69	2.95	26.00	202	0.06
71	-	33.69E	2.82	50	9.7	33.68	3.49	26.00	202	0.10
92	9.34	33.71E	3.03	75	9.4	33.70	2.87	26.06	196	0.15
141	8.51	33.96E	1.77	100	9.32	33.73	2.80	26.10	192	0.20
190	8.14	34.13E	1.47	150	8.43	34.00	1.70	26.44	160	0.29
				200	(8.09)	(34.16)	(1.43)	(26.62)	(143)	(0.36)

57.64 BLACK DOUGLAS; July 13, 1951; 2302 GCT; 38°04'N, 124°19'W; sounding, 2120 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 15°.

0	-	32.94E	5.27	0	12.5	32.94	5.27	24.92	305	0.00
10	12.42	32.83	5.14	10	12.42	32.83	5.14	24.85	311	0.03
24	-	32.86E	5.20	20	12.3	32.84	5.20	24.88	308	0.06
48	-	33.07E	4.81	30	12.3	32.90	5.15	24.92	304	0.09
70	-	33.15E	3.67	50	10.2	33.08	4.77	25.44	255	0.15
92	8.66	33.46E	3.25	75	8.7	33.21	3.55	25.79	222	0.21
139	8.31	33.75E	2.61	100	8.55	33.51	3.14	26.05	197	0.26
179	8.39	34.09E	1.92	150	8.30	33.84	2.45	26.34	169	0.35
256	7.50	34.13E	1.28	200	8.28	34.11	1.69	26.56	149	0.43
339	6.75	34.23E	0.98	250	7.56	34.12	1.31	26.67	138	0.51
418	6.22	34.25E	0.61	300	7.07	34.19	1.10	26.79	126	0.58
502	5.70	34.33E	0.35	400	6.33	34.24	0.71	26.94	113	0.70
670	4.86	34.43E	0.41	500	5.72	34.33	0.36	27.08	99	0.81
847	4.44	34.40E	0.35	600	5.19					
1047	3.88	34.49E	0.51	700	4.76					
				800	4.53					
				1000	4.02					

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

60.60

BLACK DOUGLAS; July 13, 1951; 0800, 0824 GCT; 37°37'N, 123°37'W; sounding, 1860 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 08°, 08°.

0	-	33.49E	5.30	0	10.8	33.49	5.30	25.66	234	0.00
10	10.25	33.39	4.63	10	10.25	33.39	4.63	25.67	233	0.02
25	-	33.49E	4.58	20	10.1	33.44	4.60	25.74	227	0.05
49	-	33.68E	-	30	10.1	33.53	4.57	25.81	220	0.07
74	-	33.77E	3.32	50	10.0	33.68	4.15	25.94	207	0.11
98	8.84	33.82E	2.57	75	9.1	33.77	3.26	26.16	186	0.16
150	8.52	33.95E	1.88	100	8.8	33.83	2.51	26.26	177	0.21
				150	8.52	33.95	1.88	26.40	164	0.29
195	8.23	34.05E	1.68	200	8.20	34.06	1.67	26.53	152	0.37
288	7.58	34.20E	1.46	250	7.87	34.16	1.52	26.66	139	0.45
385	5.94	34.02E	1.66	300	7.46	34.20	1.44	26.74	131	0.52
479	5.54	34.16E	0.90	400	5.84	34.03	1.56	26.83	123	0.65
577	5.14	34.22E	0.58	500	5.46	34.17	0.83	26.98	108	0.77
774	4.56	34.36E	0.38	600	5.05	34.23	0.55	27.08	99	0.88
969	4.08	34.43E	0.46	700	4.75	34.31	0.40	27.18	90	0.98
1174	3.48	34.51E	0.60	800	4.49	34.37	0.38	27.27	81	1.07
				1000	4.00	34.44	0.47	27.36	72	1.23

60.70

BLACK DOUGLAS; July 12, 1951; 0851 GCT; 37°17'N, 124°21'W; sounding, 2180 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 03°.

0	-	33.19E	5.64	0	12.4	33.19	5.64	25.12	285	0.00
10	12.41	33.17	5.98	10	12.41	33.17	5.98	25.11	286	0.03
25	-	33.24E	5.53	20	12.3	33.24	5.80	25.19	279	0.06
50	-	33.06E	4.81	30	12.3	33.23	5.38	25.18	280	0.08
75	-	33.30E	4.43	50	9.5	33.06	4.81	25.54	245	0.14
99	8.42	33.58E	3.55	75	8.8	33.30	4.43	25.84	217	0.19
152	7.67	33.80E	3.32	100	8.41	33.59	3.54	26.13	189	0.25
199	7.59	33.96E	2.71	150	7.68	33.79	3.33	26.39	165	0.34
293	6.55	34.02E	2.04	200	7.58	33.96	2.71	26.54	151	0.42
390	5.88	-	1.07	250	7.00	34.00	2.31	26.65	140	0.49
482	5.32	34.20E	0.64	300	6.50	34.03	1.98	26.75	131	0.56
581	4.85	34.31E	0.38	400	5.82	34.15	1.00	26.93	114	0.68
773	4.24	34.42E	0.37	500	5.23	34.21	0.57	27.05	103	0.80
967	3.69	34.45E	0.44	600	4.77	34.33	0.38	27.19	88	0.90
1172	3.21	34.52E	0.75	700	4.45	34.39	0.37	27.28	80	0.99
				800	4.17	34.43	0.37	27.34	75	1.07
				1000	3.60	34.46	0.49	27.42	67	1.23

60.80

BLACK DOUGLAS; July 12, 1951; 0158 GCT; 36°57'N, 125°04'W; sounding, 2260 fm; wind, 340°, force 3; weather, overcast; sea, rough; wire angle, 14°.

0	-	33.06E	5.83	0	13.4	33.06	5.83	24.83	313	0.00
10	13.30	33.04	5.50	10	13.30	33.04	5.50	24.84	312	0.03
24	-	33.04E	5.98	20	13.2	33.04	5.95	24.86	310	0.06
48	-	33.17E	5.92	30	13.2	33.05	5.98	24.87	309	0.09
71	-	33.31E	3.91	50	10.8	33.18	5.92	25.42	257	0.15
93	8.56	33.62E	3.26	75	9.0	33.35	3.75	25.85	216	0.21
142	8.22	33.93E	2.31	100	8.48	33.68	3.09	26.19	184	0.26
185	7.86	34.04E	2.00	150	8.17	33.96	2.23	26.46	158	0.35
272	7.15	34.11E	1.36	200	7.71	34.06	1.89	26.60	145	0.42
364	6.30	34.16E	1.00	250	7.31	34.10	1.50	26.69	137	0.49
451	5.70	34.22E	0.66	300	6.90	34.12	1.24	26.76	129	0.56
545	5.30	34.33E	0.38	400	6.04	34.18	0.86	26.92	114	0.69
726	4.55	34.40E	0.37	500	5.48	34.28	0.48	27.07	100	0.80
908	3.94	34.43E	0.44	600	5.07	34.36	0.37	27.18	90	0.90
1107	3.52	34.51E	0.63	700	4.65	34.39	0.37	27.25	83	0.99
				800	4.29	34.41	0.37	27.31	77	1.08
				1000	3.72	34.46	0.55	27.41	68	1.24

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

60.90 BLACK DOUGLAS; July 11, 1951; 1859 GCT; 36°37'N, 125°47'W; sounding, 2480 fm; wind, 340°, force 4; weather, overcast; sea, very rough; wire angle, 10°.

0	-	32.86E	5.92	0	13.3	32.86	5.92	24.70	325	0.00
10	13.32	32.81	5.76	10	13.32	32.81	5.76	24.66	329	0.03
24	-	32.88E	6.03	20	13.3	32.86	6.02	24.70	325	0.07
49	-	32.94E	5.94	30	13.2	32.92	6.03	24.77	319	0.10
73	-	32.83E	5.25	50	12.3	32.94	5.93	24.95	301	0.16
96	9.05	33.22E	4.64	75	9.5	32.83	5.16	25.36	262	0.23
147	8.11	33.80E	3.43	100	8.91	33.26	4.52	25.79	221	0.29
193	7.68	33.87E	3.03	150	8.07	33.81	3.40	26.35	168	0.39
286	6.63	33.93E	1.83	200	7.62	33.88	2.95	26.47	157	0.47
383	5.94	34.04E	1.13	250	7.06	33.90	2.27	26.57	148	0.55
476	5.44	34.14E	0.75	300	6.50	33.94	1.71	26.68	137	0.62
573	5.00	34.23E	0.41	400	5.84	34.06	1.04	26.85	121	0.76
767	4.32	34.29E	0.37	500	5.33	34.16	0.65	27.00	107	0.88
956	3.81	34.44E	0.48	600	4.89	34.24	0.40	27.11	97	0.98
1158	3.30	34.56E	0.69	700	4.52	34.27	0.37	27.18	90	1.08
				800	4.21	34.31	0.37	27.24	84	1.18
				1000	3.69	34.47	0.55	27.42	67	1.34

60.100 BLACK DOUGLAS; July 11, 1951; 0957 GCT; 36°17'N, 126°30'W; sounding, 2580 fm; wind, 340°, force 7; weather, overcast; sea, high; wire angle, 14°.

0	-	32.95E	3.80	0	15.5	32.95	3.80	24.31	363	0.00
10	15.46	32.90	4.42	10	15.46	32.90	4.42	24.28	365	0.04
24	-	32.92E	4.06	20	15.4	32.92	4.11	24.31	363	0.07
48	-	32.88E	4.03	30	15.4	32.92	4.04	24.31	363	0.11
72	-	32.79E	4.22	50	14.8	32.87	4.03	24.39	354	0.18
96	9.64	33.03E	3.34	75	10.7	32.80	4.22	25.14	284	0.26
147	8.50	33.62E	2.82	100	9.51	33.07	3.26	25.55	244	0.33
193	8.00	33.86E	2.46	150	8.45	33.64	2.80	26.16	186	0.44
282	6.87	34.00E	1.54	200	7.90	33.88	2.39	26.43	161	0.52
377	6.05	34.00E	1.07	250	7.25	34.00	1.89	26.62	143	0.60
466	5.30	34.13E	0.71	300	6.69	34.00	1.41	26.70	136	0.68
561	4.66	34.16E	0.53	400	5.86	34.02	0.96	26.82	124	0.81
748	4.12	34.29E	0.32	500	5.03	34.14	0.64	27.01	106	0.93
937	3.74	34.42E	0.43	600	4.52	34.18	0.46	27.10	97	1.04
1137	3.30	34.56E	0.61	700	4.24	34.26	0.34	27.19	88	1.14
				800	3.99	34.33	0.33	27.28	80	1.23
				1000	3.62	34.46	0.51	27.41	67	1.39

60.110 BLACK DOUGLAS; July 10, 1951; 2326 GCT; 35°57'N, 127°12'W; sounding, 2580 fm; wind, 340°, force 8; weather, overcast; sea, high; wire angle, 05°.

0	-	32.94E	5.45	0	15.3	32.94	5.45	24.34	360	0.00
10	15.24	32.86	5.62	10	15.24	32.86	5.62	24.29	364	0.04
24	-	32.95E	5.51	20	15.2	32.94	5.55	24.36	357	0.07
48	-	32.92E	5.49	30	15.2	32.95	5.50	24.37	357	0.11
73	-	32.90E	5.98	50	14.6	32.92	5.50	24.48	346	0.18
97	9.18	33.13E	4.48	75	10.6	32.90	5.97	25.24	274	0.26
148	8.37	33.58E	3.71	100	9.12	33.15	4.38	25.67	233	0.32
195	7.68	33.98E	2.99	150	8.34	33.60	3.67	26.15	188	0.43
286	6.78	34.09E	1.93	200	7.61	34.00	2.92	26.57	148	0.51
384	5.81	34.05E	1.38	250	7.11	34.07	2.32	26.70	136	0.58
476	5.18	34.16E	0.85	300	6.62	34.08	1.82	26.77	129	0.65
575	5.00	34.23E	0.51	400	5.68	34.06	1.30	26.88	119	0.78
768	4.31	34.38E	0.30	500	5.10	34.18	0.76	27.03	103	0.90
961	3.73	34.42E	0.52	600	4.95	34.25	0.46	27.11	96	1.00
1163	3.22	34.43E	0.59	700	4.59	34.33	0.31	27.22	86	1.10
				800	4.18	34.39	0.31	27.31	78	1.19
				1000	3.62	34.42	0.55	27.38	70	1.35

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

BLACK DOUGLAS; July 10, 1951; 1406 GCT; 35°37'N, 127°54.5'W; sounding, 2620 fm; wind, 340°, force 6; weather, overcast; sea, high; wire angle, 03°. 60.120

0	-	32.97E	5.10	0	15.6	32.97	5.10	24.30	363	0.00
10	15.60	32.86	5.29	10	15.60	32.86	5.29	24.22	371	0.04
25	-	32.95E	4.85	20	15.6	32.94	5.15	24.28	366	0.07
50	-	32.92E	4.44	30	15.3	32.95	4.66	24.35	359	0.11
74	-	32.77E	4.58	50	14.0	32.92	4.44	24.61	334	0.18
99	9.92	32.99E	4.72	75	12.1	32.77	4.58	24.86	310	0.26
152	8.70	33.58E	3.33	100	9.91	33.00	4.72	25.43	256	0.33
199	7.64	33.87E	2.67	150	8.75	33.57	3.40	26.06	196	0.45
292	6.43	33.98E	2.38	200	7.62	33.87	2.66	26.46	158	0.54
390	5.64	34.16E	1.22	250	6.93	33.94	2.45	26.62	143	0.61
484	5.25	34.20E	0.66	300	6.34	33.99	2.24	26.74	132	0.68
582	4.82	34.27E	0.45	400	5.60	34.17	1.13	26.97	110	0.81
775	4.32	34.40E	0.28	500	5.18	34.21	0.61	27.06	102	0.92
967	3.74	34.47E	0.50	600	4.75	34.28	0.41	27.16	92	1.02
				700	4.49	34.35	0.30	27.24	84	1.12
				800	4.26	34.41	0.32	27.31	77	1.20
				1000	(3.65)	(34.48)	(0.50)	(27.43)	(66)	(1.36)

BLACK DOUGLAS; July 13, 1951; 0309 GCT; 37°37'N, 123°07.5'W; sounding, 520 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, missing. 61.55

0	-	33.24E	3.39	0	11.0	33.24	3.39	25.43	256	0.00
10	10.84	33.19	3.40	10	10.84	33.19	3.40	25.42	257	0.03
25	-	33.26E	3.45	20	10.7	33.23	3.43	25.48	252	0.05
50	-	33.48E	2.87	30	10.6	33.30	3.43	25.54	245	0.08
74	-	33.66E	-	50	9.7	33.48	2.87	25.84	217	0.12
98	9.00	33.75E	2.34	75	9.4	33.67	2.50	26.04	198	0.17
152	8.44	33.88E	1.96	100	8.98	33.75	2.31	26.16	186	0.22
199	8.07	34.01E	1.66	150	8.47	33.87	1.99	26.34	169	0.31
290	7.56	34.09E	1.10	200	8.06	34.01	1.65	26.51	153	0.40
388	7.04	34.13E	1.05	250	7.76	34.06	1.34	26.59	145	0.47
483	6.61	34.18E	0.71	300	7.50	34.10	1.07	26.66	139	0.54
580	6.01	34.23E	0.40	400	7.00	34.14	1.03	26.76	129	0.68
675	5.46	34.33E	0.37	500	6.51	34.19	0.65	26.87	119	0.81
777	4.91	34.35E	0.36	600	5.88	34.25	0.39	27.00	107	0.93
876	4.52	34.42E	0.37	700	5.32	34.34	0.37	27.14	93	1.04
				800	4.80	34.36	0.36	27.21	86	1.13

BLACK DOUGLAS; July 12, 1951; 2211 GCT; 37°09'N, 122°58'W; sounding, 330 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 11°. 63.57

0	13.25	33.15E	5.12	0	13.25	33.15	5.12	24.93	303	0.00
10	-	33.07	5.05	10	13.2	33.07	5.05	24.88	308	0.03
24	-	33.12E	4.78	20	13.0	33.10	4.80	24.95	302	0.06
49	-	33.01E	5.01	30	12.9	33.14	4.79	24.99	297	0.09
72	9.41	33.24E	4.02	50	10.6	33.18	5.01	25.45	254	0.15
96	9.57	33.51E	3.49	75	9.41	33.26	3.93	25.71	229	0.21
145	8.95	33.73E	2.73	100	9.55	33.53	3.42	25.90	211	0.26
190	8.16	33.91E	2.47	150	8.89	33.75	2.70	26.18	185	0.36
235	7.50	34.01E	2.17	200	8.00	33.93	2.42	26.46	158	0.45
280	7.09	34.09E	1.46	250	7.34	34.04	1.96	26.64	141	0.53
331	6.72	34.14E	1.02	300	6.93	34.11	1.26	26.75	130	0.60
378	6.56	34.23E	0.90	400	6.38	34.23	0.87	26.92	114	0.72
432	6.03	34.13uE	0.83	500	(5.88)	(34.25)		(27.00)	(107)	(0.84)
477	5.91	34.25E	0.63							

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_{T_3}	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
63.67	BLACK DOUGLAS; July 12, 1951; 1541 GCT; 36°49'N, 123°41'W; sounding, 2060 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 04°.									
0	-	32.90E	5.29	0	14.0	32.90	5.29	24.37	356	0.00
10	13.94	32.84	5.49	10	13.94	32.84	5.49	24.34	359	0.04
25	-	32.88E	5.44	20	13.9	32.87	5.45	24.37	356	0.07
49	-	32.90E	5.59	30	13.9	32.88	5.45	24.38	355	0.11
73	-	33.01E	4.88	50	11.8	32.90	5.58	25.17	281	0.17
97	9.09	33.10E	4.83	75	10.2	33.02	4.87	25.40	259	0.24
149	8.26	33.82E	2.86	100	9.03	33.13	4.82	25.67	233	0.30
194	7.72	33.96E	2.68	150	8.26	33.83	2.85	26.34	170	0.40
288	6.55	34.02E	2.00	200	7.65	33.97	2.65	26.54	151	0.48
385	5.59	34.09E	1.27	250	7.03	34.00	2.22	26.65	140	0.56
479	5.30	34.22E	0.64	300	6.40	34.03	1.91	26.76	129	0.63
578	4.83	34.27E	0.43	400	5.53	34.11	1.14	26.94	113	0.75
772	4.22	34.40E	0.39	500	5.23	34.23	0.57	27.06	101	0.87
965	3.81	34.52E	0.57	600	4.74	34.28	0.41	27.16	92	0.97
1169	3.38	34.52E	0.83	700	4.42	34.35	0.39	27.25	83	1.06
				800	4.14	34.42	0.40	27.33	75	1.15
				1000	3.74	34.52	0.62	27.46	64	1.30
67.55	BLACK DOUGLAS; July 6, 1951; 2156, 2222 GCT; 36°39'N, 122°26'W; sounding, 1120 fm; wind, 300°, force 6; weather, partly cloudy; sea, high; wire angle, 05°, missing.									
0	-		5.94	0	15.1		5.94			
10	14.88		-	10	14.88		5.49			
24	-		5.08	20	14.90		5.10			
48	-		5.61	30	14.80		5.12			
72	-		4.17	50	11.2		5.60			
95	9.56		3.54	75	9.8		4.03			
144	8.92		3.06	100	9.4		3.49			
				150	8.86		2.99			
189	8.51		2.34	200	8.40		2.23			
278	7.60		1.72	250	7.89		1.88			
372	6.69		1.15	300	7.38		1.57			
463	6.25		0.68	400	6.51		1.00			
558	5.65		0.46	500	6.06		0.58			
746	4.78		0.32	600	5.42		0.39			
936	4.08		0.49	700	4.98		0.33			
1137	3.53		0.24u	800	4.57		0.33			
				1000	3.87					
67.65	BLACK DOUGLAS; July 7, 1951; 0541 GCT; 36°19'N, 123°09'W; sounding, 1770 fm; wind, 300°, force 5; weather, clear; sea, very rough; wire angle, 22°.									
0	-	33.15E	5.43	0	15.0	33.15	5.43	24.57	338	0.00
9	15.00	33.13	5.64	10	15.0	33.13	5.64	24.55	339	0.03
22	-	33.19E	5.42	20	15.0	33.18	5.43	24.59	336	0.07
45	-	-	5.66	30	14.7	33.19	5.44	24.66	329	0.10
69	-	33.42E	4.55	50	11.4	33.20	5.65	25.32	266	0.16
93	9.54	33.51E	3.88	75	10.1	33.44	4.35	25.74	227	0.22
142	8.40	33.96E	2.94	100	9.32	33.57	3.73	25.97	204	0.28
187	7.86	34.02E	2.60	150	8.28	33.98	2.85	26.45	159	0.37
275	6.94	34.06E	1.78	200	7.72	34.03	2.50	26.58	147	0.45
365	6.32	34.14E	1.10	250	7.19	34.05	2.03	26.67	138	0.52
452	5.76	-	0.71	300	6.75	34.08	1.57	26.75	130	0.59
543	5.33	34.25E	0.46	400	6.10	34.16	0.92	26.90	116	0.72
721	4.69	34.34E	0.39	500	5.52	34.23	0.54	27.03	104	0.83
905	4.12	34.43E	0.48	600	5.11	34.28	0.42	27.11	96	0.94
1103	3.57	-	0.69	700	4.76	34.33	0.39	27.19	88	1.03
				800	4.43	34.38	0.41	27.27	81	1.12
				1000	3.82	(34.45)	0.56	(27.39)	(70)	(1.29)

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	$10^{-5}cm^3/g$	dyn. m

BLACK DOUGLAS; July 3, 1951; 1359 GCT; 36°03'N, 122°02'W; sounding, 760 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 08°. 70.55

0	-	33.35E		0	13.1
10	13.05	33.31		10	13.05
25	-	33.31E		20	13.0
49	-	33.40E		30	13.0
97	8.96	33.68E		50	10.3
148	8.65	34.07E		75	9.1
195	8.04	33.98E		100	8.92
288	7.10	34.13E		150	8.63
387	6.24	34.18E		200	8.00
480	6.20	34.33E		250	7.45
578	5.53	-		300	6.96
768	4.62	34.40E		400	6.22
956	4.20	34.47E		500	6.15
1158	3.61	34.52E		600	5.38
				700	4.89
				800	4.52
				1000	4.08

BLACK DOUGLAS; July 5, 1951; 0227 GCT; 35°53'N, 122°23'W; sounding, 1760 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 08°. 70.60

0	-	33.33E	4.99	0	14.9	33.33	4.99	24.73	323	0.00
10	14.76	33.12	5.21	10	14.76	33.12	5.21	24.60	335	0.03
25	-	-	4.88	20	14.6	33.21	4.90	24.70	325	0.07
49	-	33.33E	5.80	30	14.4	33.30	4.90	24.81	314	0.10
73	-	33.26E	5.22	50	13.2	33.33	5.79	25.08	289	0.16
97	9.64	33.40E	4.38	75	10.9	33.26	5.17	25.46	253	0.23
148	8.56	33.78E	3.30	100	9.56	33.43	4.29	25.82	218	0.29
194	8.06	34.00E	2.99	150	8.51	33.79	3.28	26.27	176	0.39
287	6.87	-	1.97	200	7.99	(34.01)	2.92	(26.52)	(152)	(0.47)
383	6.11	-	1.09	250	7.37	(34.08)	2.40	(26.67)	(139)	(0.54)
476	5.60	34.22E	0.67	300	6.75	(34.13)	1.83	(26.80)	(126)	(0.61)
574	5.40	34.36E	0.54	400	6.01	(34.19)	0.99	(26.94)	(113)	(0.74)
764	4.68	34.45E	0.42	500	5.53	34.25	0.62	27.05	103	(0.85)
950	4.04	34.49E	0.56	600	5.33	34.38	0.51	27.17	91	(0.95)
1147	3.50	34.51E	0.71	700	4.95	34.42	0.42	27.24	84	(1.04)
				800	4.55	34.46	0.42	27.32	76	(1.13)
				1000	3.90	34.50	0.60	27.42	67	(1.29)

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_{T_3}	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

70.70 BLACK DOUGLAS; July 7, 1951; 1335, 1544 GCT; 35°33'N, 123°06'W; sounding, 2160 fm; wind, 300°, force 5; weather, partly cloudy; sea, high; wire angle, 14°, 11°.

0	-	33.21E	5.68	0	15.2		5.68			
10	15.04	-	5.47	10	15.04		5.47			
24	-	-	5.54	20	15.0		5.53			
48	-	-	5.45	30	14.1		5.54			
72	-	33.40E	4.47	50	10.7		5.43			
96	9.40	33.62E	3.75	75	9.9		4.30			
145	8.68	33.80E	3.07	100	9.36		3.64			
190	8.01	34.11E	2.46	150	8.60		3.00			
281	6.91	34.09E	1.73	200	7.85		2.36			
375	6.06	-	1.03	250	7.25		1.95			
466	5.48	34.20E	0.61	300	6.71		1.58			
562	5.07	34.36E	0.44	400	5.89		0.85			
748	4.44	34.43E	0.41	500	5.31		0.53			
935	4.00	34.43E	0.51	600	4.89		0.41			
1134	3.38	34.58E	0.71	700	4.56		0.40			
				800	4.29		0.42			
608a)	5.08	-	0.35	1000	3.86		0.57			
982	3.94	34.51E	0.56	1200	3.22		0.81			
1169	3.40	34.42E	0.78	1500	2.67		1.28			
1450	2.76	34.54E	1.25	2000	2.03		1.66			
1685	2.36	34.63E	1.38	2500	1.77		2.32			
1921	2.10	-	1.53							
2157	1.89	34.67E	1.98							
2398	1.80	34.69E	2.20							
2639	1.72	34.72E	2.46							
2885	1.64	34.76E	2.59							

70.80 BLACK DOUGLAS; July 7, 1951; 2320 GCT; 35°13'N, 123°48'W; sounding, 2250 fm; wind, 320°, force 5; weather, cloudy; sea, very rough; wire angle, 12°.

0	-	33.15E	5.71	0	15.2	33.15	5.71	24.53	342	0.00
10	15.15	33.12	5.05	10	15.15	33.12	5.05	24.51	343	0.03
24	-	33.19E	5.56	20	15.1	33.18	5.55	24.57	338	0.07
48	-	32.88E	5.31	30	14.3	33.16	5.50	24.73	323	0.10
70	-	32.99E	5.58	50	12.1	32.88	5.31	24.95	302	0.16
92	9.04	-	4.69	75	9.4	33.03	5.55	25.54	246	0.23
137	8.40	33.75E	3.34	100	8.88	33.31	4.37	25.83	217	0.29
178	8.08	33.95E	2.76	150	8.30	33.84	3.12	26.34	169	0.39
262	7.46	34.07E	1.88	200	7.94	34.00	2.51	26.52	152	0.47
350	6.30	34.09E	1.20	250	7.57	34.06	2.00	26.62	143	0.55
433	5.63	34.14E	0.88	300	7.00	34.08	1.52	26.72	134	0.62
523	5.50	34.27E	0.46	400	5.82	34.11	1.01	26.90	117	0.75
698	4.68	34.38E	0.33	500	5.51	34.24	0.54	27.04	103	0.86
877	4.18	34.47E	0.48	600	5.14	34.33	0.37	27.15	92	0.97
1070	3.56	34.47E	0.72	700	4.67	34.38	0.33	27.24	84	1.06
				800	4.37	34.44	0.40	27.32	76	1.15
				1000	3.78	34.47	0.65	27.41	68	1.30

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m

BLACK DOUGLAS; July 8, 1951; 0530 GCT; 34°53'N, 124°30'W; sounding, 2400 fm; wind, 320°, force 4; weather, clear; sea, very rough; wire angle, 22°. 70.90

0	-	32.97E	4.98	0	14.5	32.97	4.98	24.54	341	0.00
9	14.44	32.84	5.10	10	14.4	32.84	5.09	24.46	348	0.03
23	-	32.99E	4.76a)	20	14.4	32.98	4.76	24.57	338	0.09
46	-	32.81E	5.25	30	13.5	32.96	4.80	24.74	322	0.10
69	-	32.94E	5.17	50	12.0	32.82	5.24	24.92	304	0.16
92	9.64	33.19E	4.42	75	10.4	33.00	5.10	25.35	264	0.24
139	8.96	33.77E	2.91	100	9.52	33.30	4.07	25.73	227	0.30
181	8.30	34.05E	2.47	150	8.77	33.87	2.77	26.30	174	0.40
262	7.29	34.05E	1.80	200	8.05	34.05	2.30	26.54	150	0.48
347	6.54	34.12E	1.19	250	7.42	34.05	1.89	26.63	141	0.56
430	5.91	34.11E	0.84	300	6.92	34.09	1.50	26.74	132	0.63
518	5.43	34.22E	0.51	400	6.15	34.12	0.95	26.86	120	0.76
695	4.74	34.36E	0.37	500	5.51	34.19	0.55	27.00	107	0.88
875	4.16	34.45E	0.42	600	5.09	34.28	0.42	27.11	96	0.98
1072	3.57	34.49E	0.60	700	4.73	34.36	0.37	27.22	86	1.08
				800	4.41	34.41	0.38	27.30	79	1.17
				1000	3.78	34.48	0.53	27.42	67	1.33

BLACK DOUGLAS; July 8, 1951; 1154 GCT; 34°33'N, 125°12'W; sounding, 2400 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 05°. 70.100

0	-	-	5.03	0	15.3	(33.15)	5.03	(24.50)	(344)	(0.00)
10	15.30	33.15	5.14	10	15.30	33.15	5.14	24.50	344	0.03
25	-	33.15E	5.63	20	14.2	33.15	5.57	24.74	321	0.07
48	-	33.37E	4.99	30	12.6	33.20	5.61	25.10	287	0.10
72	-	33.44E	3.88	50	10.9	33.38	4.83	25.55	244	0.15
94	9.32	33.59E	3.40	75	9.9	33.46	3.75	25.79	222	0.21
144	8.34	33.93E	2.86	100	9.19	33.64	3.34	26.05	197	0.26
188	7.73	34.02E	2.52	150	8.26	33.95	2.81	26.43	161	0.35
279	6.97	34.13E	1.54	200	7.60	34.04	2.41	26.60	145	0.43
375	6.09	34.14E	1.07	250	7.19	34.10	1.85	26.70	135	0.50
466	5.59	34.22E	0.71	300	6.78	34.13	1.40	26.79	127	0.57
562	5.34	34.36E	0.42	400	5.94	34.16	0.97	26.92	114	0.69
756	4.52	34.43E	0.38	500	5.49	34.27	0.57	27.06	101	0.81
945	3.92	34.49E	0.51	600	5.21	34.38	0.39	27.18	89	0.91
1150	3.42	34.52E	0.64	700	4.79	34.42	0.38	27.26	82	1.00
				800	4.36	34.45	0.40	27.34	75	1.08
				1000	3.76	34.50	0.57	27.43	66	1.24

BLACK DOUGLAS; July 8, 1951; 1803 GCT; 34°13'N, 125°54'W; sounding, 2480 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 12°. 70.110

0	-	32.92E	5.70	0	15.0	32.92	5.70	24.39	355	0.00
10	14.86	32.85	5.71	10	14.86	32.85	5.71	24.36	357	0.04
24	-	33.03E	5.56	20	14.7	33.01	5.58	24.52	342	0.07
49	-	32.92E	5.74	30	14.6	33.01	5.57	24.54	340	0.10
73	-	32.94E	5.48	50	12.2	32.92	5.73	24.96	301	0.17
97	9.79	33.28E	4.41	75	10.7	32.95	5.40	25.26	272	0.24
151	8.69	33.69E	3.37	100	9.77	33.31	4.33	25.69	231	0.30
197	8.26	34.00E	2.61	150	8.71	33.68	3.40	26.16	187	0.41
287	6.73	34.12E	2.45	200	8.20	34.01	2.59	26.49	155	0.50
383	5.74	34.16E	1.37	250	7.40	34.09	2.48	26.67	138	0.57
475	5.15	34.18E	0.92	300	6.55	34.13	2.37	26.82	124	0.64
572	4.82	34.22E	0.39	400	5.61	34.16	1.27	26.96	110	0.76
762	4.20	34.42E	0.33	500	5.06	34.19	0.78	27.05	102	0.87
952	3.74	34.54uE	0.53	600	4.74	34.25	0.36	27.13	94	0.98
1152	3.35	34.52E	0.75	700	4.41	34.36	0.33	27.25	82	1.07
				800	4.09	34.45	0.34	27.36	72	1.16
				1000	3.65	34.54	0.60	27.48	61	1.30

a) Alternate value, 4.52 ml/L, not used in interpolation.

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

70.110 BLACK DOUGLAS; July 8, 1951; 2016 GCT;[a] 34°13'N, 125°54'W; sounding, 2480 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 08°.

738	4.29	34.42E	0.31
762	4.21	34.45E	0.38
786	4.16	34.49E	0.35
809	4.09	34.51E	0.34
834	4.04	34.54E	0.42
858	3.96	34.51E	0.44
882	3.90	34.52E	0.46
907	3.84	34.56E	0.48
931	3.75	34.51E	0.48
956	3.74	34.52E	0.56
981	3.68	34.52E	0.55

70.120 BLACK DOUGLAS; July 9, 1951; 0257 GCT; 33°53'N, 126°35.5'W; sounding, 2460 fm; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 05°.

0	-	33.24E	5.25	0	16.0	33.24	5.25	24.42	352	0.00
10	15.99	33.12	5.34	10	15.99	33.12	5.34	24.33	361	0.04
25	-	33.22E	5.09	20	16.0	33.22	5.12	24.40	354	0.07
50	-	33.39E	5.24	30	16.0	33.23	5.10	24.41	353	0.11
74	-	33.33E	5.58	50	16.0	33.39	5.24	24.53	341	0.18
99	11.84	33.01E	5.72	75	13.3	33.32	5.59	25.05	292	0.26
152	9.25	33.22E	4.81	100	11.85	33.01	5.72	25.10	287	0.33
199	8.36	33.75E	3.75	150	9.30	33.21	4.86	25.69	231	0.46
294	7.21	34.09E	2.43	200	8.35	33.76	3.75	26.27	176	0.56
391	5.94	34.09E	1.66	250	7.65	34.00	2.99	26.56	148	0.65
485	5.48	34.16E	0.94	300	7.12	34.09	2.38	26.71	134	0.72
583	4.80	34.34E	0.60	400	5.87	34.10	1.58	26.88	118	0.85
777	4.08	34.43E	0.35	500	5.39	34.18	0.88	27.01	106	0.97
969	3.74	34.61E	0.50	600	4.72	34.35	0.55	27.21	86	1.07
1187	3.20	34.58E	0.73	700	4.34	34.40	0.38	27.29	79	1.16
				800	4.02	34.44	0.35	27.36	73	1.24
				1000	3.70	34.61	0.55	27.53	57	1.39

73.51 BLACK DOUGLAS; July 3, 1951; 2239, 2253 GCT; 35°35.5'N, 121°20'W; sounding, 170 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 06°, 20°.

0	-	33.40E	4.68	0	12.3	33.40	4.68	25.31	267	0.00
9	11.80	33.37	4.94	10	11.77	33.37	4.93	25.39	260	0.03
23	11.22	33.53E	4.90	20	11.32	33.51	4.91	25.58	241	0.05
				30	10.99	33.55	4.78	25.67	233	0.08
44	10.56	33.60E	4.20	50	10.37	33.62	4.03	25.83	217	0.12
65	9.93	33.71E	3.67	75	9.30	33.77	3.05	26.13	189	0.17
86	9.01	33.84E	2.48	100	8.93	33.88	2.25	26.28	175	0.22
133	8.72	33.98E	1.93	150	8.59	34.03	1.78	26.45	159	0.30
177	8.44	34.11E	1.59	200	8.31	34.15	1.64	26.58	146	0.38
225	8.13	34.20E	1.72							

a) Test cast.

OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
BLACK DOUGLAS; July 4, 1951; 1942 GCT; 35°16'N, 122°02.5'W; sounding, 1630 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 15°.										73.61
0	-	33.26E	4.92	0	13.6	33.26	4.92	24.95	302	0.00
10	13.59	33.21	4.86	10	13.59	33.21	4.86	24.91	305	0.03
24	-	33.28E	5.17	20	13.5	33.27	5.16	24.98	299	0.06
48	-	33.21E	4.68	30	13.2	33.27	5.09	25.04	293	0.09
71	-	33.48E	3.98	50	12.4	33.21	4.63	25.14	283	0.15
94	9.74	33.58E	3.31	75	10.4	33.50	3.86	25.73	227	0.21
144	8.96	33.93E	-	100	9.61	33.63		25.97	205	0.27
188	8.51	34.06E	-	150	8.88	33.95		26.34	170	0.36
277	7.87	34.18E	-	200	8.41	34.08		26.51	153	0.44
371	6.86	34.11E	-	250	8.05	34.16		26.63	142	0.52
460	5.98	34.25E	-	300	7.67	34.17		26.69	136	0.59
553	5.43	-	1.02	400	6.55	34.17		26.85	121	0.72
736	4.66	34.31E	-	500	5.72	(34.26)		(27.03)	(104)	(0.84)
916	4.10	34.47E	-	600	5.20	(34.28)		(27.10)	(97)	(0.95)
1112	3.58	34.52E	-	700	4.79	(34.30)		(27.17)	(91)	(1.05)
				800	4.44	34.36		27.25	83	(1.14)
				1000	3.88	34.50		27.42	67	(1.30)
BLACK DOUGLAS; July 4, 1951; 0415 GCT; 34°54.5'N, 121°13'W; sounding, 320 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 23°.										77.55
0	-	33.30E	5.82	0	14.3	33.30	5.82	24.83	313	0.00
10	14.23	33.28	5.86	10	14.23	33.28	5.86	24.83	313	0.03
23	-	33.35E	5.86	20	13.9	33.34	5.86	24.95	302	0.06
46	-	33.33E	4.91	30	12.0	33.35	5.82	25.33	265	0.09
67	-	33.40E	4.10	50	10.6	33.33	4.70	25.57	243	0.14
89	9.10	33.58E	3.88	75	9.8	33.45	4.00	25.80	221	0.20
132	9.02	34.02E	2.20	100	9.15	33.77	3.76	26.15	187	0.25
172	8.38	34.00E	3.00	150	8.85	34.02	3.21	26.40	164	0.34
214	8.47	34.18E	1.72	200	8.44	34.13	2.70	26.54	150	0.42
255	7.38	34.05E	2.12	250	7.50	34.06	2.17	26.63	142	0.49
301	6.96	34.11E	1.71	300	6.96	34.11	1.72	26.75	131	0.56
345	6.87	34.13E	1.33	400	7.02	34.28	0.77	26.87	119	0.69
390	7.06	34.27E	0.81							
439	6.75	34.33E	0.67							
BLACK DOUGLAS; July 4, 1951; 1120 GCT; 34°34'N, 121°55'W; sounding, 2080 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 11°.										77.65
0	-	33.30E	5.81	0		33.30	5.81			
10	14.64	33.14	5.78	10	14.64	33.14	5.78	24.64	331	
24	-	33.21E	5.76	20		33.20	5.77			
48	-	33.21E	5.55	30		33.21	5.73			
72	-	33.39E	4.38	50		33.22	5.52			
96	9.24	33.61E	3.92	75		33.42	4.27			
148	8.34	33.95E	3.15	100		33.64	3.86			
194	7.92	34.07E	2.39	150	8.33	33.96	3.10	26.43	161	
286	6.93	34.13E	1.72	200	7.86	34.07	2.32	26.59	146	
384	6.60	34.21E	0.93	250	7.28	34.11	1.95	26.70	135	
476	5.98	34.31E	0.50	300	6.87	34.14	1.60	26.78	128	
574	5.49	34.38E	0.37	400	6.51	34.23	0.83	26.91	116	
763	4.70	34.44E	0.44	500	5.83	34.33	0.43	27.07	100	
948	4.02	34.48E	0.62	600	5.35	34.39	0.37	27.18	90	
1145	3.46	34.51E	0.75	700	4.92	34.42	0.40	27.25	83	
				800	4.58	34.45	0.50	27.31	77	
				1000	3.83	34.49	0.65	27.42	67	

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

80.60 PAOLINA-T; July 1, 1951; 2000 GCT; 34°09'N, 121°09'W; sounding, 1380 fm; wind, 290°, force 4; weather, overcast; sea, very rough; wire angle, 14°.

0	-	33.13E	0	15.0	33.13	24.55	339	0.00
11	14.97	33.06	10	15.0	33.06	24.50	344	0.03
25	-	33.14E	20	15.0	33.11	24.54	341	0.07
49	-	33.18E	30	15.0	33.15	24.57	338	0.10
73	-	33.35E	50	13.1	33.19	25.00	297	0.17
97	9.34	33.49E	75	9.6	33.37	25.77	224	0.23
149	8.29	33.94E	100	9.30	33.51	25.92	209	0.29
196	7.76	34.07E	150	8.29	33.95	26.43	161	0.38
292	6.79	34.13E	200	7.72	34.07	26.61	144	0.46
393	6.28	34.28E	250	7.19	34.10	26.70	135	0.53
490	5.92	34.38E	300	6.74	34.14	26.80	125	0.60
602	5.38	34.40E	400	6.25	34.29	26.98	108	0.72
829	4.62	34.52E	500	5.89	34.38	27.10	97	0.82
1041	3.87	34.52E	600	5.39	34.40	27.18	90	0.92
1275	3.32	34.61E	700	5.01	34.45	27.26	82	1.01
			800	4.71	34.51	27.34	74	1.10
			1000	4.06	34.52	27.42	67	1.25

80.70 PAOLINA-T; July 2, 1951; 0315 GCT; 33°49'N, 121°51'W; sounding, 1900 fm; wind, 300°, force 4; weather, overcast; sea, rough; wire angle, 30°.

0	-	33.35E	0	15.2	33.35	24.68	327	0.00
9	15.07	33.26	10	15.1	33.26	24.63	332	0.03
22	-	33.32E	20	15.1	33.32	24.67	328	0.07
47	-	33.39E	30	15.0	33.34	24.71	324	0.10
93	8.85	33.71E	50	11.3	33.40	25.50	249	0.16
158	8.21	33.96E	75	9.4	33.60	25.98	203	0.21
200	7.58	34.08E	100	8.73	33.75	26.21	182	0.26
300	6.80	34.20E	150	8.27	33.94	26.42	161	0.35
410	5.70	34.25E	200	7.58	34.08	26.63	142	0.42
508	5.53	34.34E	250	7.17	34.16	26.76	130	0.49
604	5.20	34.42E	300	6.80	34.20	26.84	122	0.56
804	4.47	34.50E	400	5.77	34.25	27.02	105	0.68
1013	3.85	34.55E	500	5.55	34.33	27.10	97	0.78
1242	3.31	34.61E	600	5.22	34.42	27.20	87	0.88
			700	4.86	34.47	27.29	79	0.97
			800	4.49	34.50	27.36	73	1.05
			1000	3.88	34.55	27.46	63	1.20

80.80 PAOLINA-T; July 2, 1951; 1037, 1107 GCT; 33°29'N, 122°32'W; sounding, 2160 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 26°, missing.

0	-	33.10E	0	15.4	33.10	24.44	350	0.00
9	15.04	33.04	10	15.0	33.04	24.48	346	0.03
22	-	33.22E	20	14.6	33.21	24.70	325	0.07
49	-	33.12E	30	14.1	33.20	24.80	316	0.10
72	-	33.12E	50	13.0	33.12	24.96	300	0.16
99	9.52	33.47E	75	10.8	33.13	25.38	261	0.23
148	8.71	33.94E	100	9.51	33.48	25.87	214	0.29
197	8.00	34.09E	150	8.70	33.95	26.37	167	0.39
294	7.04	34.17E	200	7.99	34.09	26.59	146	0.47
395	6.38	34.26E	250	7.47	34.14	26.70	135	0.54
495	5.98	34.43E	300	7.00	34.18	26.80	126	0.61
			400	6.36	34.27	26.96	111	0.73
594	5.44	34.38E	500	5.95	34.43	27.13	94	0.84
790	4.48	34.43E	600	5.40	34.38	27.16	92	0.94
992	3.94	34.64E	700	4.88	34.39	27.23	85	1.03
1191	3.39	34.64E	800	4.45	34.44	27.32	77	1.12
			1000	3.93	34.64	27.53	56	1.26

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Paolina-T samples on Cruise 5107, it is estimated that the mean effect of evaporation was 0.058‰, with standard deviation of 0.074‰.

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

PAOLINA-T; July 2, 1951; 1835 GCT; 33°10'N, 123°21'W; sounding, 2200 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 15°. 80.90

0	-	33.12E	0	15.0	33.12	24.54	340	0.00
10	14.96	33.06	10	14.96	33.06	24.51	344	0.03
24	-	33.16E	20	14.9	33.15	24.59	336	0.07
48	-	33.10E	30	14.8	33.15	24.61	334	0.10
72	-	33.04E	50	14.4	33.09	24.65	330	0.17
96	11.73	33.32E	75	13.3	33.04	24.84	312	0.25
147	9.20	33.75E	100	11.42	33.37	25.45	254	0.32
193	8.30	33.96E	150	9.15	33.77	26.15	187	0.43
286	7.14	34.12E	200	8.21	33.98	26.46	158	0.52
382	6.40	34.22E	250	7.57	34.07	26.63	142	0.60
475	6.10	34.33E	300	7.01	34.13	26.75	130	0.67
573	5.54	34.41E	400	6.34	34.24	26.94	113	0.79
764	4.42	34.41E	500	5.99	34.35	27.07	100	0.90
956	3.92	34.53E	600	5.36	34.41	27.19	89	1.00
1157	3.39	34.56E	700	4.76	34.41	27.26	82	1.10
			800	4.29	34.42	27.32	76	1.18
			1000	3.82	34.54	27.46	63	1.34

PAOLINA-T; July 3, 1951; 0055 GCT; 32°49'N, 123°54'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 17°. 80.100

0	-	33.19E	0	16.1	33.19	24.36	358	0.00
9	16.09	33.12	10	16.1	33.12	24.30	363	0.04
23	-	33.18E	20	15.9	33.18	24.40	354	0.07
47	-	33.14E	30	15.7	33.18	24.44	350	0.11
71	-	33.09E	50	15.1	33.14	24.54	341	0.18
94	11.64	33.10E	75	13.2	33.09	24.90	306	0.26
146	9.30	33.40E	100	11.35	33.12	25.27	271	0.33
195	8.44	33.86E	150	9.23	33.43	25.87	214	0.45
290	7.25	34.11E	200	8.37	33.89	26.38	166	0.55
390	6.05	34.15E	250	7.74	34.06	26.60	145	0.63
487	5.46	34.25E	300	7.15	34.12	26.72	133	0.70
587	4.98	34.32E	400	5.97	34.16	26.92	114	0.83
785	4.38	34.45E	500	5.40	34.26	27.07	100	0.94
981	3.82	34.54E	600	4.94	34.33	27.18	90	1.04
1184	3.41	34.58E	700	4.62	34.40	27.26	81	1.14
			800	4.34	34.46	27.34	74	1.22
			1000	3.78	34.55	27.47	62	1.37

PAOLINA-T; July 3, 1951; 0730 GCT; 32°29'N, 124°34.5'W; sounding, 2350 fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 15°. 80.110

0	-	33.19E	0	16.1	33.19	24.36	358	0.00
10	15.96	33.12	10	15.96	33.12	24.34	360	0.04
24	-	33.20E	20	15.8	33.19	24.42	352	0.07
48	-	33.17E	30	15.6	33.20	24.48	346	0.11
72	-	33.14E	50	15.4	33.17	24.50	345	0.18
93	12.34	33.19E	75	14.8	33.14	24.61	334	0.26
149	9.33	33.51E	100	11.73	33.23	25.29	269	0.34
198	8.61	-	150	9.32	33.52	25.93	208	0.46
294	7.22	34.04E	200	8.57	33.84	26.30	173	0.56
403	6.08	34.13E	250	7.87	33.99	26.52	152	0.64
506	5.36	34.21E	300	7.16	34.05	26.67	138	0.71
608	5.01	34.35E	400	6.11	34.13	26.87	119	0.85
810	4.30	34.47E	500	5.39	34.20	27.02	105	0.96
1004	3.73	34.52E	600	5.04	34.34	27.16	91	1.07
1208	3.32	34.58E	700	4.70	34.42	27.27	81	1.16
			800	4.34	34.47	27.36	73	1.24
			1000	3.75	34.52	27.45	64	1.40

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m
85.40	PAOLINA-T; July 8, 1951; 0518 GCT; 33°57'N, 119°11'W; sounding, 410 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 13°.							
0	-	33.46E	0		33.46			
10	16.21	33.39	10	16.21	33.39			
24	-	33.40E	20		33.40			
48	-	33.38E	30		33.40			
72	-	33.59E	50		33.39			
96	9.46	33.77E	75		33.60			
149	8.90	33.99E	100	9.40	33.78	26.12	190	
197	8.44	34.14E	150	8.90	33.99	26.36	167	
245	8.40	34.22E	200	8.44	34.15	26.56	149	
295	7.66	34.17E	250	8.38	34.22	26.63	142	
351	7.26	34.22E	300	7.59	34.17	26.71	135	
400	7.31	34.39E	400	7.31				
452	6.96	34.34E	500	6.67				
505	6.63	34.31E	600	5.95				
636	5.68	-						
90.30	PAOLINA-T; July 6, 1951; 1700 GCT; 33°24'N, 117°56'W; sounding, 123 fm; wind, 310°, force 1; weather, clear; sea, slight; wire angle, 02°.							
0	-	33.49E	0	18.3	33.49	24.06	386	0.00
10	18.14	33.58E	10	18.14	33.58	24.17	375	0.04
25	-	33.40E	20	17.7	33.42	24.16	377	0.08
50	-	33.58E	30	16.8	33.41	24.36	357	0.11
75	-	33.75E	50	10.0	33.58	25.87	214	0.17
99	9.20	33.95E	75	9.4	33.75	26.10	192	0.22
153	9.36	34.14E	100	9.20	33.96	26.29	174	0.27
			150	9.34	34.13	26.41	163	0.35
90.37	PAOLINA-T; July 6, 1951; 1209 GCT; 33°10'N, 118°23'W; sounding, 600 fm; wind, 240°, force 1; weather, clear; sea, slight; wire angle, 04°.							
0	-	33.43E	0	17.5	33.43	24.21	372	0.00
10	17.46	33.35	10	17.46	33.35	24.16	377	0.04
25	-	33.43E	20	17.1	33.43	24.30	363	0.07
48	-	33.37E	30	15.4	33.42	24.69	326	0.11
73	-	33.60E	50	11.5	33.37	25.44	255	0.17
98	9.32	33.86E	75	9.6	33.62	25.97	205	0.22
152	9.17	34.19E	100	9.30	33.88	26.21	181	0.27
201	9.07	34.29E	150	9.17	34.18	26.47	157	0.36
299	8.42	34.31E	200	9.07	34.28	26.56	148	0.44
403	7.76	34.34E	250	8.77	34.30	26.63	142	0.51
501	6.67	34.38E	300	8.41	34.31	26.69	136	0.58
607	5.88	34.49uE	400	7.79	34.34	26.81	125	0.72
706	5.43	34.42E	500	6.69	34.38	27.00	107	0.84
810	5.02	34.43E	600	5.94	34.41	27.11	96	0.94
1010	4.28	34.50E	700	5.46	34.42	27.18	89	1.04
			800	5.07	34.43	27.24	84	1.14
			1000	4.32	34.50	27.38	71	1.31
90.53	PAOLINA-T; July 6, 1951; 0001, 0033 GCT; 32°36'N, 119°31'W; sounding, 300 fm; wind, 290°, force 5; weather, cloudy; sea, rough; wire angle, 12°, 12°.							
0	-	33.49E	0	15.5	33.49	24.72	323	0.00
10	-	33.48	10	15.4	33.48	24.74	322	0.03
24	15.10	33.58E	20	15.2	33.56	24.84	312	0.06
49	10.04	33.74E	30	12.90	33.65	25.39	260	0.09
73	9.31	-	50	9.97	33.75	26.01	201	0.14
98	8.94	33.93E	75	9.27	33.85	26.20	183	0.19
151	8.54	34.10E	100	8.91	33.95	26.33	170	0.23
198	8.00	34.14E	150	8.55	34.10	26.51	154	0.31
244	7.70	34.18E	200	7.99	34.14	26.63	142	0.39
			250	7.66	34.19	26.71	134	0.46
292	7.44	34.32E	300	7.40	34.32	26.85	121	0.52
346	7.20	34.34E	400	6.61				
389	6.67	34.47E						
444	6.51	34.38E						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

90.60 PAOLINA-T; July 5, 1951; 1850 GCT; 32°22'N, 119°55'W; sounding, 450 fm; wind, 310°, force 5; weather, overcast; sea, rough; wire angle, 32°.

0	-	33.64E	0	15.3	33.64	24.88	308	0.00
8	15.01	33.55	10	15.0	33.55	24.87	309	0.03
21	-	33.57E	20	15.0	33.57	24.89	307	0.06
44	-	33.68E	30	15.0	33.60	24.91	305	0.09
66	-	33.81E	50	12.5	33.72	25.52	247	0.15
88	9.26	34.00E	75	10.0	33.94	26.14	188	0.20
137	8.30	33.96E	100	8.96	33.98	26.35	168	0.25
182	7.73	34.09E	150	8.10	34.00	26.50	155	0.33
227	7.72	34.23E	200	7.71	34.15	26.67	138	0.40
273	7.59	34.29E	250	7.67	34.26	26.76	129	0.47
323	7.10	-	300	7.36				

90.70 PAOLINA-T; July 5, 1951; 1207 GCT; 32°04'N, 120°37'W; sounding, 2150 fm; wind, 300°, force 5; weather, overcast; sea, moderate; wire angle, 26°.

0	-	33.30E	0	16.1	33.30	24.42	350	0.00
9	15.76	33.23E	10	15.7	33.23	24.48	346	0.03
27	-	33.30E	20	15.7	33.27	24.51	344	0.07
54	-	33.31	30	15.7	33.31	24.54	341	0.10
80	-	33.14E	50	15.6	33.32	24.57	338	0.17
106	11.02	33.18E	75	13.7	33.15	24.84	312	0.25
159	9.14	33.77E	100	11.4	33.16	25.29	269	0.33
211	8.68	34.07E	150	9.32	33.69	26.06	195	0.44
316	8.13	34.29	200	8.75	34.02	26.42	162	0.53
415	6.96	34.34E	250	8.46	34.18	26.58	146	0.62
520	6.18	34.38E	300	8.22	34.27	26.69	136	0.69
621	5.68	34.45E	400	7.17	34.33	26.90	117	0.82
833	4.48	34.49E	500	6.32	34.37	27.04	103	0.94
1038	3.93	34.60E	600	5.78	34.44	27.17	91	1.04
1247	3.31	34.61E	700	5.24	34.47	27.25	83	1.13
			800	4.64	34.48	27.32	76	1.22
			1000	4.02	34.58	27.47	62	1.37

90.80 PAOLINA-T; July 5, 1951; 0255 GCT; 31°45'N, 121°19'W; sounding, 2025 fm; wind, 300°, force 5; weather, overcast; sea, rough; wire angle, 25°.

0	-	33.32E	0	16.7	33.32	24.32	362	0.00
9	16.70	33.22	10	16.7	33.22	24.24	369	0.04
22	-	33.28E	20	16.7	33.27	24.28	365	0.07
48	-	33.55E	30	16.7	33.37	24.36	358	0.11
70	-	33.41E	50	16.4	33.55	24.56	338	0.18
95	14.06	33.43E	75	15.4	33.41	24.68	327	0.26
141	10.42	33.38E	100	13.55	33.43	25.09	288	0.34
185	8.93	33.76E	150	10.07	33.40	25.71	229	0.47
276	7.64	34.06E	200	8.67	33.85	26.29	174	0.57
371	6.32	34.14E	250	7.98	34.01	26.53	152	0.66
466	5.74	34.24E	300	7.31	34.08	26.67	138	0.73
565	5.29	34.33E	400	6.11	34.17	26.91	116	0.86
760	4.58	34.42E	500	5.58	34.27	27.05	102	0.98
968	4.03	34.59E	600	5.17	34.35	27.17	91	1.08
1171	3.50	34.64E	700	4.80	34.39	27.24	84	1.18
			800	4.45	34.45	27.32	76	1.26
			1000	3.94	34.60	27.50	60	1.41

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

90.90 PAOLINA-T; July 4, 1951; 1915 GCT; 31°27.5'N, 122°00'W; sounding, 2030 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 10°.

0	-	33.28E	0	16.4	33.28	24.36	358	0.00
10	16.14	33.10	10	16.14	33.10	24.28	365	0.04
24	-	33.18E	20	16.1	33.17	24.34	360	0.07
48	-	33.17E	30	16.1	33.18	24.35	359	0.11
73	-	33.13E	50	14.8	33.16	24.62	333	0.18
97	10.85	33.15E	75	12.4	33.13	25.08	289	0.26
150	9.12	33.68E	100	10.68	33.16	25.42	256	0.32
199	8.56	33.94E	150	9.12	33.68	26.09	193	0.44
297	7.29	34.11E	200	8.55	33.94	26.39	165	0.53
398	6.18	34.29E	250	7.95	34.03	26.55	150	0.61
496	5.54	34.31E	300	7.27	34.12	26.71	134	0.68
598	5.06	34.36E	400	6.18	34.29	27.00	107	0.81
800	4.43	34.50E	500	5.52	34.31	27.09	98	0.92
997	3.83	34.53E	600	5.04	34.36	27.18	89	1.02
1198	3.31	34.60E	700	4.71	34.43	27.28	80	1.11
			800	4.43	34.50	27.36	72	1.19
			1000	3.82	34.53	27.45	64	1.34

90.100 PAOLINA-T; July 4, 1951; 1040 GCT; 31°05'N, 122°40'W; sounding, 2000 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 20°.

9	16.24	33.11	0	16.5			
92	12.08	-	10	16.2			
142	9.34	33.57E	20	16.0			
188	8.60	33.93E	30	15.8			
281	7.50	34.13E	50	15.4			
377	6.22	34.19E	75	13.8			
470	5.78	34.31E	100	11.50			
567	5.28	34.34E	150	9.20	33.66	26.06	196
759	4.64	34.49E	200	8.45	33.98	26.43	161
950	3.84	34.54E	250	7.85	34.09	26.60	144
1150	3.34	34.59E	300	7.26	34.14	26.72	133
			400	6.08	34.22	26.95	112
			500	5.65	34.32	27.08	99
			600	5.15	34.36	27.18	90
			700	4.82	34.45	27.28	80
			800	4.51	34.50	27.36	73
			1000	3.69	34.55	27.48	61

90.110 PAOLINA-T; July 4, 1951; 0037, 0105, 0245 GCT; 30°45'N, 123°20'W; sounding, 2110 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 10°, 10°, 27°.

10	16.22	0	16.3
96	12.20	10	16.22
145	9.52	20	16.0
189	8.68	30	15.9
271	7.36	50	15.4
356	6.45	75	14.3
438	5.66	100	11.85
		150	9.41
527	5.36	200	8.49
710	4.62	250	7.67
902	3.99	300	7.00
1106	3.47	400	6.03
		500	5.44
543a)	5.37	600	5.10
909	3.90	700	4.65
1093	3.52	800	4.29
1379	2.99	1000	3.70
1616	2.55	1200	3.30
1865	2.23	1500	2.77
2116	2.00	2000	2.11
2370	1.84	2500	1.79
2638	1.74		
2941	1.65		

a) Overlapping casts; reconciliation of temperature curves.

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
PAOLINA-T; July 11, 1951; 0841 GCT; 32°50'N, 117°31.5'W; sounding, 580 fm; wind, 220°, force 1; weather, overcast; sea, slight; wire angle, 02°.								93.30
0	-	33.48E	0	18.1	33.48	24.11	382	0.00
10	18.11	-	10	18.11	(33.47)	(24.10)	(383)	(0.04)
75	-	33.57E	20	17.7	(33.45)	(24.18)	(374)	(0.08)
99	10.06	33.68E	30	16.0	(33.44)	(24.57)	(337)	(0.11)
153	9.56	34.02E	50	13.0	(33.48)	(25.24)	(274)	(0.17)
203	9.30	34.25E	75	11.0	33.57	25.68	232	(0.24)
301	7.97	34.22E	100	10.02	33.69	25.95	207	(0.29)
404	7.11	34.29E	150	9.57	34.00	26.27	176	(0.39)
503	6.34	34.39E	200	9.32	34.24	26.49	155	(0.47)
607	5.64	34.40E	250	8.77	34.24	26.58	146	(0.55)
705	5.21	34.51E	300	7.99	34.22	26.69	136	(0.62)
808	4.80	34.57E	400	7.15	34.29	26.86	120	(0.76)
1006	3.88	34.52E	500	6.37	34.39	27.05	102	(0.87)
			600	5.68	34.40	27.14	93	(0.98)
			700	5.23	34.50	27.28	81	(1.07)
			800	4.84	34.57	27.38	71	(1.15)
			1000	3.92	34.52	27.43	66	(1.30)
PAOLINA-T; July 10, 1951; 2130 GCT; 32°24'N, 118°25'W; sounding, 630 fm; wind, 270°, force 4; weather, overcast; sea, rough; wire angle, 06°.								93.40
0	-	-	0	17.2	33.50	24.34	360	0.00
10	17.23	33.40	10	17.23	33.40	24.25	368	0.04
25	-	33.58E	20	16.1	33.56	24.64	331	0.07
49	-	33.47E	30	13.8	33.57	25.14	283	0.10
98	9.12	33.91E	50	11.4	33.47	25.53	246	0.15
152	8.44	34.09E	75	10.0	33.70	25.96	206	0.21
201	7.98	34.18E	100	9.10	33.92	26.28	175	0.26
299	7.24	34.32E	150	8.48	34.08	26.50	154	0.34
401	6.48	34.34E	200	8.00	34.17	26.65	140	0.42
500	6.10	34.45E	250	7.59	34.26	26.78	128	0.49
603	5.68	34.45E	300	7.23	34.32	26.87	119	0.55
703	5.15	34.46E	400	6.49	34.34	26.99	108	0.67
807	4.72	34.57E	500	6.10	34.45	27.12	95	0.77
1012	4.04	34.56E	600	5.69	34.45	27.18	90	0.87
			700	5.16	34.46	27.25	83	0.96
			800	4.74	34.57	27.39	70	1.04
			1000	4.07	34.56	27.45	64	1.19
PAOLINA-T; July 9, 1951; 2247 GCT; 31°11'N, 120°55'W; sounding, 2000 fm; wind, 300°, force 5; weather, overcast; sea, very rough; wire angle, 16°.								93.80
0	-	33.37E	0	17.2	33.37	24.24	369	0.00
9	17.13	33.33	10	17.1	33.33	24.23	370	0.04
29	-	33.58E	20	17.1	33.49	24.35	358	0.07
57	-	33.69E	30	17.1	33.60	24.44	350	0.11
112	12.96	33.34E	50	17.2	33.68	24.48	347	0.18
168	9.74	33.62E	75	16.3	33.65	24.66	329	0.26
224	8.59	33.96E	100	14.1	33.38	24.94	303	0.34
334	7.16	34.10E	150	10.35	33.50	25.74	226	0.48
441	5.98	34.15E	200	9.05	33.85	26.23	180	0.58
552	5.49	34.31E	250	8.22	34.01	26.48	156	0.67
667	4.86	34.40E	300	7.56	34.08	26.64	141	0.74
886	4.26	34.53E	400	6.40	34.13	26.84	122	0.88
1101	3.54	34.51E	500	5.68	34.23	27.00	106	1.00
1319	3.12	34.71E	600	5.25	34.35	27.16	92	1.11
			700	4.73	34.42	27.27	81	1.20
			800	4.45	34.49	27.36	73	1.28
			1000	3.91	34.52	27.44	65	1.44

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

97.32 PAOLINA-T; July 12, 1951; 0118 GCT; 32°11.5'N, 117°17'W; sounding, 720 fm; wind, 270°, force 2; weather, partly cloudy; sea, slight; wire angle, 12°.

10	16.64	33.40	0	(16.8)				
49	-	33.25E	10	16.64				
73	-	33.33E	20	15.8				
96	10.03	33.67E	30	14.6				
149	8.93	-	50	12.6				
198	8.78	-	75	11.0				
293	8.12	34.31E	100	9.84				
392	7.30	-	150	8.93				
488	6.42	-	200	8.78				
591	5.96	34.40E	250	8.49				
688	5.26	-	300	8.05				
791	4.76	34.48E	400	7.24				
991	4.22	34.58E	500	6.35				
			600	5.92				
			700	5.18				
			800	4.74				
			1000	(4.20)				

97.40 PAOLINA-T; July 12, 1951; 0649 GCT; 31°56'N, 117°49'W; sounding, 880 fm; wind, 220°, force 2; weather, overcast; sea, slight; wire angle, 18°.

0	-	33.20E	0	16.0	33.20	24.39	355	0.00
9	16.00	33.13	10	16.0	33.13	24.33	360	0.04
23	-	33.21E	20	16.0	33.20	24.39	355	0.07
46	-	33.22E	30	16.0	33.22	24.40	354	0.11
69	-	33.17E	50	12.6	33.21	25.11	286	0.17
91	10.04	33.40E	75	10.6	33.19	25.46	253	0.24
137	9.06	33.74E	100	9.78	33.46	25.81	220	0.30
180	8.60	34.09E	150	8.89	33.84	26.25	178	0.40
265	8.18	34.34E	200	8.48	34.19	26.49	155	0.48
356	7.29	34.37E	250	8.24	34.32	26.59	146	0.55
444	6.54	34.40E	300	7.92	34.36	26.72	133	0.62
540	5.99	34.42E	400	6.89	34.39	26.81	125	0.74
727	5.01	34.48E	500	6.21	34.41	26.98	109	0.85
916	4.28	34.58E	600	5.67	34.43	27.17	91	0.95
1118	3.81	34.58E	700	5.16	34.47	27.26	82	1.04
			800	4.70	34.52	27.35	73	1.13
			1000	4.06	34.58	27.47	62	1.28

97.50 PAOLINA-T; July 12, 1951; 1344 GCT; 31°39'N, 118°25'W; sounding, 850 fm; wind, 300°, force 3; weather, overcast; sea, slight; wire angle, 10°.

0	-	33.17E	0	16.0	33.17	24.36	357	0.00
10	15.99	33.19	10	15.99	33.19	24.38	356	0.04
25	-	33.33E	20	16.0	33.28	24.45	349	0.07
48	-	33.22E	30	15.8	33.30	24.51	344	0.11
73	-	33.25E	50	14.3	33.22	24.78	318	0.17
96	11.93	33.59E	75	12.0	33.26	25.26	272	0.25
151	11.42	33.68E	100	11.93	33.60	25.54	245	0.31
198	9.56	33.96E	150	11.44	33.67	25.68	232	0.43
294	7.60	34.12E	200	9.53	33.96	26.24	179	0.54
790	4.98	34.46E	250	8.31	34.06	26.51	153	0.62
988	4.03	34.49E	300	(7.54)	(34.13)	(26.68)	(137)	(0.70)
1192	3.54	34.55E						

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

97.60 PAOLINA-T; July 12, 1951; 2116 GCT; 31°19'N, 119°05'W; sounding, 680 fm; wind, 290°, force 2; weather, overcast; sea, moderate; wire angle, 13°.

0	-	33.30E	0	16.0	33.30	24.46	348	0.00
10	15.83	33.22	10	15.83	33.22	24.44	350	0.03
25	-	33.34E	20	15.6	33.32	24.57	338	0.07
49	-	33.19E	30	15.2	33.33	24.67	328	0.10
72	-	33.27E	50	13.1	33.19	25.00	297	0.17
95	10.31	-	75	11.1	33.29	25.45	254	0.23
145	9.12	33.94E	100	10.15	33.46	25.74	226	0.30
189	8.44	34.06E	150	9.04	33.96	26.32	172	0.40
280	7.03	34.18E	200	8.30	34.08	26.53	151	0.48
376	6.24	34.20E	250	7.45	34.15	26.71	135	0.55
469	6.10	34.34E	300	6.81	34.18	26.82	124	0.62
567	5.47	34.38E	400	6.18	34.22	26.94	112	0.74
661	5.05	-	500	5.99	34.35	27.07	100	0.85
760	4.73	-	600	5.28				
956	4.12	34.54E	700	4.92				
			800	4.60				
			1000	(3.99)				

97.70 PAOLINA-T; July 13, 1951; 0602 GCT; 30°57.5'N, 119°45.5'W; sounding, 1900 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 20°.

0	-	33.22E	0	15.9	33.22	24.43	351	0.00
10	15.79	33.21	10	15.79	33.21	24.44	350	0.04
19	-	33.24E	20	15.8	33.24	24.46	348	0.07
67	-	33.40E	30	15.8	33.28	24.49	345	0.10
96	9.79	33.55E	50	13.5	33.34	25.03	294	0.17
183	8.30	33.96E	75	10.8	33.43	25.61	238	0.24
241	7.56	34.00E	100	9.70	33.57	25.91	210	0.29
354	6.56	34.19E	150	8.83	33.86	26.27	175	0.39
463	5.68	34.42uE	200	8.06	33.98	26.49	155	0.47
576	5.23	34.38E	250	7.45	34.01	26.60	145	0.55
686	4.69	34.39E	300	7.00	34.08	26.72	133	0.62
908	4.00	34.53E	400	6.19	34.28	26.98	108	0.75
1122	3.50	34.57E	500	5.50	34.37	27.14	93	0.85
1332	3.08	34.58E	600	5.13	34.38	27.18	89	0.95
			700	4.63	34.39	27.25	83	1.04
			800	4.29	34.46	27.35	74	1.12
			1000	3.78	34.55	27.48	62	1.27

97.80 PAOLINA-T; July 13, 1951; 1331, 1406, 1451 GCT; 30°40.5'N, 120°23'W; sounding, 1930 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 10°, missing, missing.

0	-	33.22E	0	15.4	33.22	24.54	341	0.00
10	15.26	33.15	10	15.26	33.15	24.51	343	0.03
25	-	33.29E	20	15.1	33.27	24.64	331	0.07
54	-	33.21E	30	14.9	33.29	24.70	325	0.10
78	-	33.22E	50	14.5	33.21	24.73	323	0.17
107	11.51	33.19E	75	13.8	33.22	24.88	309	0.24
160	9.36	33.55E	100	12.0	33.20	25.22	276	0.32
212	8.49	33.97E	150	9.67	33.45	25.82	219	0.44
316	7.02	34.06E	200	8.66	33.91	26.34	170	0.54
426	6.02	34.16E	250	7.92	34.01	26.54	151	0.63
528	5.38	34.25E	300	7.24	34.05	26.66	139	0.70
			400	6.24	34.14	26.86	120	0.84
637	5.04	34.31E	500	5.55	34.22	27.02	105	0.95
843	4.31	34.41E	600	5.13	34.29	27.12	95	1.06
			700	4.85	34.34	27.19	89	1.16
1061	3.71	34.52E	800	4.48	34.39	27.27	81	1.25
1260	3.24	34.54E	1000	3.85	34.49	27.42	67	1.41

SIO

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

97.90 PAOLINA-T; July 13, 1951; 2305 GCT; 30°15'N, 121°11'W; sounding, 2150 fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 12°.

0	-	33.32E	0	16.9	33.32	24.27	366	0.00
10	16.88	33.35	10	16.88	33.35	24.29	364	0.04
24	-	33.40E	20	16.8	33.39	24.34	359	0.07
48	-	33.31E	30	16.8	33.39	24.34	359	0.11
72	-	33.21E	50	16.2	33.28	24.40	354	0.18
96	12.98	33.27E	75	14.3	33.21	24.77	319	0.26
149	10.29	33.65E	100	12.70	33.30	25.17	281	0.34
197	9.16	33.94E	150	10.26	33.66	25.88	213	0.46
293	7.46	34.08E	200	9.11	33.94	26.29	174	0.56
395	6.24	34.11E	250	8.15	34.04	26.52	152	0.65
491	5.71	34.19E	300	7.36	34.08	26.67	138	0.72
593	5.11	34.25E	400	6.19	34.11	26.85	121	0.86
792	4.49	34.47E	500	5.68	34.19	26.98	109	0.98
986	3.88	34.60E	600	5.08	34.25	27.09	98	1.09
1189	3.47	34.59E	700	4.74	34.37	27.23	85	1.19
			800	4.45	34.48	27.34	74	1.27
			1000	3.85	34.60	27.50	59	1.42

100.40 PAOLINA-T; July 16, 1951; 0440 GCT; 31°21'N, 117°27'W; sounding, 900 fm; wind, 240°, force 1; weather, overcast; sea, slight; wire angle, 04°.

0	-	33.40E	0	17.1	33.40	24.28	365	0.00
10	16.97	33.34	10	16.97	33.34	24.27	366	0.04
25	-	33.51E	20	16.8	33.49	24.42	352	0.07
50	-	33.16E	30	16.6	33.49	24.47	347	0.11
74	-	33.31E	50	14.1	33.16	24.77	319	0.17
99	10.66	33.45E	75	11.9	33.31	25.32	266	0.25
153	9.67	33.93E	100	10.65	33.46	25.66	234	0.31
201	9.42	34.21E	150	9.72	33.90	26.16	186	0.42
299	8.82	34.44E	200	9.43	34.20	26.44	160	0.50
401	6.95	34.31E	250	9.17	34.37	26.62	143	0.58
498	6.38	34.35E	300	8.80	34.44	26.74	132	0.65
600	5.86	34.39E	400	6.96	34.31	26.90	116	0.78
802	4.76	34.46E	500	6.38	34.35	27.02	105	0.90
998	4.18	34.52E	600	5.86	34.39	27.11	96	1.00
1203	3.63	34.64E	700	5.32	34.43	27.21	87	1.10
			800	4.78	34.46	27.30	78	1.19
			1000	4.17	34.52	27.41	68	1.35

100.40 PAOLINA-T; July 16, 1951; 0617 GCT;[a] 31°21'N, 117°27'W; sounding, 900 fm; wind, 240°, force 1; weather, overcast; sea, slight; wire angle, 04°.

680	-	34.43E
704	-	34.34
729	-	34.45E
753	-	34.46E
777	-	34.44E
803	4.76	-
828	4.64	34.61E
852	4.58	34.48E
876	4.46	34.53E
901	4.36	34.54E
926	4.31	34.52E
951	4.27	34.51E
976	4.24	34.52E
1001	4.16	34.52E

a) Test cast.

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

PAOLINA-T; July 15, 1951; 2205 GCT; 31°01'N, 118°06'W; sounding, 980 fm; wind, 300°, force 3; weather, overcast; sea, moderate; wire angle, 02°. 100.50

0	-	33.20E	0	16.6	33.20	24.25	368	0.00
10	16.18	33.33	10	16.18	33.33	24.44	350	0.04
25	-	33.18E	20	15.9	33.22	24.43	351	0.07
49	-	33.33E	30	15.6	33.19	24.47	347	0.11
74	-	33.30E	50	15.0	33.33	24.70	325	0.17
98	11.15	33.39E	75	13.0	33.30	25.10	287	0.25
153	9.60	33.96E	100	11.05	33.42	25.56	244	0.32
202	9.40	34.23E	150	9.63	33.94	26.20	182	0.42
302	8.86	34.34E	200	9.40	34.22	26.46	157	0.51
405	7.86	34.42E	250	9.16	34.29	26.56	149	0.59
504	6.97	34.42E	300	8.87	34.34	26.64	141	0.66
608	6.00	34.42E	400	7.92	34.42	26.85	121	0.80
810	4.84	34.46E	500	7.01	34.42	26.98	109	0.92
1008	4.18	-	600	6.08	34.42	27.11	97	1.03
1210	3.63	34.56E	700	5.42	34.44	27.20	87	1.13
			800	4.89	34.46	27.28	80	1.22
			1000	4.20	(34.50)	(27.39)	(70)	(1.38)

PAOLINA-T; July 15, 1951; 1450 GCT; 30°43'N, 118°49'W; sounding, 1450 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 20°. 100.60

0	-	33.18E	0	16.1	33.18	24.35	359	0.00
9	16.03	33.19	10	16.0	33.19	24.38	356	0.04
23	-	33.18E	20	16.0	33.19	24.38	356	0.07
51	-	33.12E	30	15.9	33.17	24.39	355	0.11
74	-	33.21E	50	14.8	33.12	24.59	336	0.18
102	11.78	33.24E	75	13.2	33.21	24.99	297	0.26
151	10.02	33.64E	100	11.8	33.23	25.28	270	0.33
200	8.92	33.89E	150	10.07	33.62	25.88	213	0.45
298	7.54	34.10E	200	8.92	33.89	26.28	175	0.55
399	6.32	34.16E	250	8.18	34.03	26.51	153	0.63
496	5.90	34.36E	300	7.52	34.10	26.66	139	0.71
595	5.50	34.34E	400	6.32	34.16	26.87	119	0.84
790	4.70	34.46E	500	5.89	34.36	27.08	99	0.96
992	4.02	34.45	600	5.48	34.34	27.12	95	1.06
1194	3.47	34.53E	700	5.04	34.40	27.22	86	1.16
			800	4.67	34.46	27.31	77	1.25
			1000	4.00	34.45	27.37	72	1.41

PAOLINA-T; July 15, 1951; 0058 GCT; 30°03'N, 120°03'W; sounding, 1950 fm; wind, 310°, force 5; weather, overcast; sea, rough; wire angle, 21°. 100.80

0	-	33.61E	0	18.1	33.61	24.20	373	0.00
10	18.04	33.53	10	18.04	33.53	24.15	377	0.04
24	-	33.70E	20	18.0	33.69	24.29	364	0.07
51	-	33.62E	30	18.0	33.69	24.29	364	0.11
74	-	-	50	17.9	33.63	24.27	366	0.18
101	10.84	33.53E	75	13.0	33.56	25.30	268	0.26
151	9.43	33.85E	100	10.9	33.53	25.67	233	0.33
200	8.82	34.05E	150	9.47	33.84	26.15	187	0.43
301	7.38	34.20E	200	8.82	34.05	26.43	161	0.52
406	6.48	34.26E	250	8.11	34.14	26.60	144	0.60
507	5.64	34.40E	300	7.40	34.20	26.75	130	0.67
607	5.26	34.39E	400	6.52	34.26	26.92	114	0.80
807	4.60	34.46E	500	5.69	34.40	27.14	94	0.91
1009	3.86	34.55E	600	5.28	34.39	27.18	90	1.00
1199	3.45	34.62E	700	4.95	34.42	27.24	83	1.10
			800	4.63	34.46	27.31	77	1.18
			1000	3.89	34.55	27.46	63	1.34

S10

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} T_3 cm/g	ΔD dyn. m

100.90 PAOLINA-T; July 14, 1951; 1727, 1747 GCT; 29°38'N, 120°51'W; sounding, 1960 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 20°, missing.

0	-	33.34E	0	17.1	33.34	24.24	369	0.00
10	17.01	33.26	10	17.01	33.26	24.20	373	0.04
23	-	33.65E	20	16.8	33.38	24.34	360	0.07
51	-	33.49E	30	17.1	33.64	24.47	347	0.11
73	-	33.38E	50	15.9	33.51	24.65	330	0.18
100	12.45	33.31E	75	13.9	33.37	24.97	299	0.26
			100	12.45	33.31	25.21	277	0.33
148	10.60	33.51E	150	10.53	33.54	25.74	226	0.46
196	9.10	33.86E	200	9.03	33.87	26.25	178	0.56
292	7.58	34.14E	250	8.20	34.05	26.52	152	0.64
395	6.86	34.25E	300	7.50	34.15	26.70	135	0.72
494	5.77	-	400	6.82	34.25	26.88	119	0.85
594	5.45	34.42E	500	5.75	34.34	27.08	99	0.96
795	4.63	34.51E	600	5.43	34.42	27.18	89	1.06
1000	3.92	34.53E	700	5.05	34.48	27.28	80	1.16
1202	3.45	34.59E	800	4.61	34.51	27.36	73	1.24
			1000	3.92	34.53	27.44	65	1.39

100.100 PAOLINA-T; July 14, 1951; 0719, 0921 GCT; 29°21'N, 121°27'W; sounding, 2230 fm; wind, 300°, force 4; weather, overcast; sea, moderate; wire angle, 11°, 18°.

0	-	33.65Ea)	0	18.3	33.65	24.18	374	0.00
10	18.04	33.53	10	18.04	33.53	24.16	377	0.04
24	-	33.66E	20	17.8	33.64	24.30	363	0.07
49	-	33.58E	30	17.5	33.65	24.38	355	0.11
73	-	33.72E	50	16.9	33.58	24.47	347	0.18
97	15.24	33.58E	75	16.1	33.72	24.76	319	0.26
151	11.16	33.51E	100	14.96	33.58	24.91	306	0.34
199	9.38	33.90E	150	11.23	33.51	25.59	240	0.48
294	7.54	34.09E	200	9.38	33.90	26.22	181	0.59
384	6.48	34.17E	250	8.25	34.02	26.49	155	0.68
491	5.98	34.28E	300	7.49	34.10	26.67	138	0.75
593	5.28	34.38E	400	6.39	34.18	26.88	118	0.89
794	4.61	34.50E	500	5.94	34.29	27.03	104	1.00
989	3.99	34.54	600	5.30	34.39	27.18	90	1.11
			700	4.93	34.46	27.28	80	1.20
623b)	5.32	34.42E	800	4.59	34.50	27.34	74	1.28
1039	3.77	34.54E	1000	3.95	34.54	27.45	64	1.43
1248	3.24	34.57E	1200	3.33	34.56	27.53	57	1.57
1566	2.68	34.65E	1500	2.80	34.64	27.64	46	1.75
1832	2.26	34.67E	2000	2.08	34.69	27.74	37	2.01
2101	2.00	34.70E	2500	1.80	34.76	27.82	29	2.22
2373	1.85	34.73E	3000	1.65	(34.79)	(27.85)	(26)	(2.42)
2646	1.74	34.79E						
2949	1.66	34.79E						
3300	1.60	34.73E						

a) Salinity bottle numbers for the first cast appear to have been listed in reverse; present order is assumed to be correct.

b) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

110.60

CREST; July 6, 1951; 1933 GCT; 28°56.5'N, 117°39'W; sounding, 2000 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 14°.

0	-		4.58	0.52	0	17.8	4.58	0.52
10	17.42	33.40	5.11	0.66	10	17.42	5.11	0.66
24	-		-	0.64	20	17.2	5.11	0.65
53	-		5.10	0.64	30	17.3	5.11	0.64
76	-		5.30	0.72	50	16.6	5.10	0.64
103	11.60		4.47	1.30	75	13.9	5.28	0.71
153	10.09		2.42	2.28	100	11.8	4.61	1.22
202	10.14		1.33	2.74	150	10.09	2.49	2.24
300	9.50		0.61	3.08	200	10.13	1.37	2.73
403	8.66		0.51	3.21	250	9.85	0.85	2.96
502	7.16		0.46	-	300	9.50	0.61	3.08
602	6.51		0.35	3.50	400	8.70	0.52	3.20
801	5.13		0.36	3.60	500	7.18	0.45	3.36
1004	4.26		0.58	3.57	600	6.52	0.35	3.50
1205	3.66		0.45	3.55	700	5.80	0.35	3.57
					800	5.14	0.36	3.60
					1000	4.28	0.58	3.57

110.70

CREST; July 6, 1951; 1037 GCT; 28°36.5'N, 118°18'W; sounding, 2100 fm; wind, 340°, force 4; weather, clear; sea, rough; wire angle, 17°.

0	-		5.23	0.56	0	18.5	5.23	0.56
10	18.42	33.73	5.09	0.57	10	18.42	5.09	0.57
24	-		5.20	0.61	20	18.4	5.15	0.60
53	-		5.41	0.60	30	18.4	5.25	0.61
76	-		5.83	0.67	50	17.5	5.39	0.60
103	12.13		5.16	1.22	75	14.6	5.82	0.66
					100	12.1	5.27	1.19

110.80

CREST; July 6, 1951; 0320 GCT; 28°16.5'N, 118°57.5'W; sounding, 2100 fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 15°.

0	-		5.19	0.56	0	18.1	5.19	0.56
10	18.08	33.48	5.19	0.56	10	18.08	5.19	0.56
24	-		5.20	0.56	20	18.0	5.19	0.56
52	-		5.48	0.60	30	18.0	5.22	0.56
76	-		4.82	1.03	50	16.0	5.47	0.59
104	11.09		3.84	1.58	75	13.0	4.89	0.99
					100	11.3	3.95	1.51

110.90

CREST; July 5, 1951; 2023 GCT; 27°58'N, 119°35'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, missing.

0	-		4.18	-	0	18.2	4.18	
10	18.13	33.53	4.06	0.58	10	18.13	4.06	0.58
24	-		5.09	0.58	20	17.9	4.80	0.58
53	-		5.41	0.71	30	15.2	5.20	0.59
76	-		4.09	1.29	50	14.8	5.40	0.68
104	10.53		2.96	1.85	75	11.4	4.33	1.24
154	9.80		1.95	2.26	100	10.7	3.09	1.80
202	9.40		1.31	-	150	9.85	2.02	2.23
300	8.21		0.88	-	200	9.43	1.34	
403	7.12		0.36	-	250	8.84	1.07	
496	6.26		0.33	3.32	300	8.21	0.88	
599	5.63		0.16	3.40	400	7.15	0.38	
792	4.64		0.40	-	500	6.23	0.34	3.32
987	3.93		0.63	3.42	600	5.64	0.16	(3.40)
1181	3.46		0.71	3.33	700	5.10	0.27	(3.41)
					800	4.60	0.41	(3.42)
					1000	3.90	0.65	3.42

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

110.90

CREST; July 5, 1951; 2201, 2232 GCT;[a] 27°58'N, 119°35'W; sounding, 2000 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 16°, missing.

770	4.72							
793	4.70							
818	4.57							
841	4.48							
867	4.38							
890	4.30							
919	4.18							
945	4.09							
969	4.02							
995	3.92							

120.35

CREST; July 3, 1951; 1455 GCT; 28°03'N, 114°54'W; sounding, 47 fm; wind, 320°, force 3; weather, overcast; sea, slight; wire angle, missing.

0	17.20		5.18	0.56	0	17.20	5.18	0.56
9	-	33.66	5.32	0.54	10	16.95	5.31	0.54
18	16.78		5.24	0.56	20	16.76	5.25	0.56
27	-		5.26	0.59	30	16.63	5.27	0.59
36	16.56		5.29	0.62	50	15.76	5.28	0.73
47	-		5.31	-				
60	13.99		4.81	1.06				

120.45

CREST; July 3, 1951; 1941 GCT; 27°43'N, 115°33'W; sounding, missing; wind, 320°, force 3; weather, overcast; sea, slight; wire angle, missing.

0	-		5.40	0.50	0	17.5	5.40	0.50
8	17.50	33.49	5.35	0.49	10	17.5	5.36	0.49
23	-		5.67	0.51	20	17.5	5.58	0.50
45	-		5.83	0.56	30	16.1	5.76	0.52
67	-		5.09	1.06	50	13.9	5.78	0.60
88	11.35		4.18	1.32	75	11.7	4.73	1.16
135	9.98		2.89	2.00	100	10.78	3.82	1.46
177	9.93		1.68	2.42	150	9.95	2.37	2.20
262	9.40		1.04	2.74	200	9.84	1.45	2.52
348	9.52		0.28	3.08	250	9.42	1.12	2.69
430	8.68		0.25	3.14	300	9.45	0.70	2.88
523	7.12		0.28	-	400	9.11	0.25	3.13
715	5.71		0.35	-	500	7.45	0.27	
911	4.48		0.48	-	600	6.50	0.34	
1116	3.72		0.80	3.37	700	5.81	0.35	
					800	5.18	0.38	
					1000	4.11	0.63	

120.50

CREST; July 3, 1951; 2311, 2333 GCT; 27°33'N, 115°52.5'W; sounding, 2020 fm; wind, 290°, force 4; weather, overcast; sea, slight; wire angle, 15°, missing.

0	-		5.26	0.50	0	17.8	5.26	0.50
9	16.60	33.46	5.36	0.50	10	16.6	5.36	0.50
24	-		5.20	0.59	20	15.8	5.26	0.55
48	-		4.79	1.04	30	14.9	5.11	0.68
71	-		3.55	1.60	50	13.0	4.70	1.11
95	10.61		3.05	1.97	75	10.8	3.46	1.67
145	9.87		2.09	2.32	100	10.50	2.98	2.01
					150	9.85	1.98	2.37
188	9.76		1.27	2.78	200	9.68	1.15	2.87
276	8.74		0.67	3.12	250	9.05	0.79	3.07
367	7.70		0.41	3.12	300	8.45	0.58	3.12
453	6.79		0.34	3.25	400	7.30	0.38	3.16
547	6.32		0.24	-	500	6.53	0.30	(3.31)
730	5.19		0.37	3.44	600	6.01	0.26	(3.41)
917	4.48		0.43	3.31	700	5.39	0.34	(3.44)
1115	3.76		0.68	3.28	800	4.88	0.42	3.40
					1000	4.17	0.51	3.29

a) Test cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; July 4, 1951; 0454, 0646 GCT; 27°13'N, 116°31.5'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 10°, 07°. 120.60

0	-		5.12	0.64	0	17.8	5.12	0.64
10	17.64	33.43	5.13	-	10	17.64	5.13	0.67
23	-		5.32	0.74	20	16.4	5.30	0.72
54	-		5.44	1.16	30	15.4	5.38	0.80
78	-		3.33	-	50	13.4	5.44	1.10
107	10.31		2.76	-	75	11.2	3.55	
159	9.86		1.97	-	100	10.6	2.86	
211	10.54		0.57	-	150	9.88	2.17	
313	9.54		0.26	3.05	200	10.47	0.70	
419	7.52		0.57	3.28	250	10.34	0.38	
523	6.72		0.32	3.39	300	9.72	0.26	
625	5.64		0.27	3.44	400	7.73	0.54	3.25
828	4.70		0.32	-	500	6.92	0.37	3.37
1035	3.97		0.62	3.50	600	5.86	0.27	3.43
1237	3.43		0.93	3.45	700	5.25	0.27	(3.47)
					800	4.82	0.30	(3.49)
586a)	6.27		0.34	3.33	1000	4.14	0.51	(3.50)
974	4.21		0.48	-	1200	3.57	0.72	3.47
1201	3.56		0.72	3.39	1500	2.90	1.10	3.26
1430	3.05		0.99	3.28	2000	2.11	1.96	
1658	2.60		1.42	3.26	2500	1.82	2.43	
1877	2.27		1.79	-				
2098	2.04		2.09	-				
2320	1.88		2.32	-				
2546	1.81		2.45	-				
2775	1.71		2.58	2.86				

CREST; July 4, 1951; 1211 GCT; 26°52.5'N, 117°10'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 22°. 120.70

0	-		5.14	0.52	0	18.3	5.14	0.52
9	18.28	33.44	5.18	-	10	18.3	5.17	0.52
23	-		5.11	0.52	20	18.2	5.11	0.52
51	-		5.30	0.52	30	18.0	5.14	0.52
73	-		5.32	0.58	50	17.0	5.29	0.52
99	13.32		5.39	0.84	75	15.1	5.32	0.58
146	10.93		3.99	1.60	100	13.30	5.38	0.87
190	9.53		2.99	2.04	150	10.75	3.88	1.62
277	9.22		0.99	2.80	200	9.46	2.77	2.12
368	8.14		0.57	-	250	9.31	1.50	2.57
456	7.22		0.39	3.24	300	9.03	0.84	2.91
546	6.26		0.26	3.38	400	7.78	0.49	3.16
726	5.11		0.27	-	500	6.77	0.30	3.31
918	4.40		0.54	3.47	600	5.89	0.27	(3.41)
1114	3.73		0.74	3.38	700	5.27	0.27	(3.44)
					800	4.80	0.35	(3.46)
					1000	4.11	0.65	3.45

a) Overlapping casts; reconciliation of property curves when necessary.

S10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
120.80	CREST; July 4, 1951; 1722, 1754 GCT; 26°32.5'N, 117°48.5'W; sounding, 2070 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 25°, missing.							
0	-		5.02	0.57	0	18.4	5.02	0.57
9	18.37	33.48	4.96	0.68	10	18.3	4.96	0.68
24	-		5.04	0.67	20	18.3	5.02	0.67
51	-		5.40	-	30	18.0	5.12	0.67
72	-		5.54	0.70	50	16.9	5.35	0.68
98	14.02		5.13	-	75	16.9	5.54	(0.71)
145	10.90		3.87	-	100	13.92	5.09	(0.87)
188	9.63		3.03	2.18	150	10.73	3.75	(1.81)
					200	9.40	2.89	2.27
270	8.40		2.22	2.73	250	8.62	2.38	2.60
359	7.84		0.77	3.26	300	8.19	1.80	2.94
447	7.10		0.37	3.43	400	7.50	0.54	3.36
537	6.41		0.28	-	500	6.69	0.30	
720	5.11		0.33	-	600	5.97	0.29	
917	4.36		0.46	3.68	700	5.26	0.33	
1115	3.74		0.65	3.61	800	4.77	0.39	
					1000	4.10	0.54	3.66
120.90	CREST; July 4-5, 1951; 2305, 0123 GCT; 26°13'N, 118°27.5'W; sounding, 2100 fm; wind, 340°, force 3; weather, overcast; sea, moderate; wire angle, 15°, 32°.							
0	-		4.50	0.58	0	18.8	4.50	0.58
10	18.54	33.50	4.82	0.62	10	18.54	4.82	0.62
25	-		4.73	-	20	18.5	4.78	(0.62)
53	-		4.77	0.62	30	18.1	4.73	(0.62)
77	-		4.97	0.54	50	16.9	4.74	(0.62)
105	15.09		5.07	0.59	75	16.5	4.94	0.55
154	11.33		4.25	1.18	100	15.2	5.07	0.57
203	9.91		2.79	2.06	150	11.54	4.39	1.12
301	8.52		1.26	-	200	10.00	2.89	2.02
404	7.45		0.59	3.17	250	9.15	1.80	(2.52)
504	6.44		0.46	3.34	300	8.53	1.27	(2.83)
603	5.76		0.37	-	400	7.50	0.59	(3.16)
802	4.77		0.45	3.48	500	6.49	0.47	3.33
1015	4.05		0.61	3.52	600	5.79	0.37	(3.41)
1205	3.50		0.81	-	700	5.24	0.38	(3.46)
					800	4.77	0.45	(3.48)
508a)	6.42		-	3.25	1000	4.08	0.60	3.52
844	4.66		-	3.53	1200	3.52	0.80	
1043	3.93		0.56	-	1500	2.88	1.20	
1245	3.40		0.78	3.54	2000	2.13	1.92	
1449	2.98		1.12	-	2500	1.80	2.42	
1646	2.58		1.43	-				
1854	2.28		1.75	-				
2065	2.07		1.98	-				
2283	1.90		2.27	-				
2508	1.80		2.43	-				

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; July 3, 1951; 0910 GCT; 27°18'N, 114°51.5'W; sounding, 400 fm; wind, 320°, force 4; weather, clear; sea, slight; wire angle, 10°. 123.40

0	14.74		5.41	0.90	0	14.74	5.41	0.90
10	-	33.60	5.22	0.99	10	14.8	5.22	0.99
25	-		4.84	-	20	13.7	4.96	1.09
49	-		4.00	1.44	30	13.4	4.66	1.18
72	10.81		2.11	2.32	50	11.6	3.90	1.46
96	10.72		1.93	-	75	10.75	2.07	2.34
148	10.98		1.30	2.74	100	10.70	1.91	2.51
194	11.16		0.69	2.88	150	10.99	1.25	2.75
240	11.14		0.57	3.00	200	11.17	0.65	2.89
289	10.46		0.30	3.20	250	11.08	0.52	3.02
340	9.82		0.29	-	300	10.29	0.30	3.22
389	9.28		0.28	3.30	400	9.18	0.26	
437	8.78		0.24	-	500	(7.85)	(0.30)	
487	8.02		0.29	-				

CREST; July 3, 1951; 0337 GCT; 26°58'N, 115°30.5'W; sounding, 1990 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 18°. 123.50

0	-		5.16	0.48	0	18.4	5.16	0.48
10	18.48		5.04	0.50	10	18.48	5.04	0.50
24	-		5.21	0.50	20	18.0	5.13	0.50
52	-		5.66	0.54	30	17.7	5.33	0.50
75	-		4.67	1.12	50	16.2	5.64	0.53
102	10.84		3.21	1.76	75	12.0	4.67	1.12
152	9.94		2.05	2.37	100	10.9	3.34	1.71
201	10.78		0.52	-	150	9.94	2.10	2.34
299	9.80		0.33	3.05	200	10.77	0.53	2.74
401	7.78		0.42	3.19	250	10.45	0.39	2.93
501	6.62		0.31	-	300	9.78	0.34	3.05
601	6.04		0.30	-	400	7.81	0.42	3.19
799	4.95		0.31	-	500	6.64	0.32	
1001	4.12		0.57	-	600	6.04	0.30	
1203	3.61		0.78	3.38	700	5.52	0.30	
					800	4.95	0.31	
					1000	4.13	0.57	

CREST; July 2, 1951; 2216 GCT; 26°38.5'N, 116°09'W; sounding, 1020 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 13°. 123.60

0	-		5.11	0.48	0	18.8	5.11	0.48
10	18.42	33.48	4.80	0.49	10	18.42	4.80	0.49
24	-		4.48	0.49	20	18.3	4.49	0.49
48	-		5.10	0.48	30	18.2	4.49	0.49
71	-		5.37	0.52	50	16.9	5.15	0.48
94	13.57		4.86	0.62	75	15.0	5.36	0.53
144	10.61		3.28	1.75	100	13.00	4.70	0.74
189	9.75		2.47	2.14	150	10.47	3.15	1.81
279	9.16		0.99	2.77	200	9.65	2.28	2.23
372	7.97		0.55	3.05	250	9.32	1.37	2.58
461	7.22		0.37	3.18	300	8.97	0.85	2.86
558	6.31		0.34	3.30	400	7.70	0.48	3.10
746	5.05		0.36	3.40	500	6.89	0.35	3.23
935	4.32		0.58	3.39	600	6.00	0.35	3.34
1136	3.74		0.71	3.40	700	5.33	0.35	3.39
					800	4.81	0.40	3.40
					1000	4.11	0.65	3.39

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
127.50	CREST; July 2, 1951; 1100 GCT; 26°22'N, 115°08.5'W; sounding, 2000 fm; wind, 320°, force 3; weather, cloudy; sea, slight; wire angle, missing.							
0	-		5.21	0.52	0	18.4	5.21	0.52
10	18.32	33.62	5.19	-	10	18.32	5.19	0.52
25	-		5.44	0.54	20	18.0	5.32	0.53
54	-		5.65	0.70	30	16.5	5.49	0.55
78	-		4.09	1.31	50	14.9	5.64	0.65
106	11.22		3.04	1.84	75	12.2	4.75	1.25
157	9.99		2.15	2.26	100	11.2	3.21	1.56
208	9.12		1.85	2.51	150	10.12	2.23	2.18
311	8.63		0.63	-	200	9.22	1.89	2.46
419	7.27		0.39	3.28	250	8.87	1.42	(2.78)
522	6.70		0.30	3.35	300	8.68	0.71	(3.04)
625	5.80		0.29	3.40	400	7.50	0.42	(3.26)
828	-		0.35	3.47	500	6.82	0.31	3.33
1036	4.11		0.49	3.48	600	6.00	0.30	3.39
1237	3.62		0.69	3.46	700	(5.41)	0.32	3.43
					800	(4.97)	0.35	3.46
					1000	(4.22)	0.45	3.48
127.60	CREST; July 2, 1951; 1621 GCT; 26°02'N, 115°47'W; sounding, 2080 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 05°.							
0	-		4.90	0.50	0		4.90	0.50
10	18.30	33.58	4.90	0.49	10	18.30	4.90	0.49
24	-		5.14	0.48	20		5.00	0.48
49	-		5.33	0.50	30		5.18	0.48
72	-		5.62	0.54	50		5.34	0.50
96	12.61		4.92	0.92	75		5.62	0.55
146	10.15		2.97	1.89	100	12.43	4.79	1.04
192	9.58		2.05	2.30	150	10.08	2.85	1.92
283	9.60		0.50	-	200	9.57	1.92	(2.36)
379	8.01		0.40	3.19	250	9.59	0.98	(2.67)
469	7.32		0.24	3.32	300	9.49	0.40	(2.91)
566	6.12		0.28	3.34	400	7.80	0.27	3.23
759	-		0.29	3.44	500	7.03	0.25	3.33
950	4.42		0.40	3.46	600	(5.89)	0.28	3.36
1151	3.80		0.51	3.44	700	(5.39)	0.28	3.42
					800	(4.94)	0.29	3.45
					1000	4.24	0.46	3.46
130.35	CREST; June 30, 1951; 0618 GCT; 26°19'N, 113°48.5'W; sounding, 280 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 31°.							
0	17.99		5.29		0	17.99	5.29	
8	17.96	33.63	5.28		10	17.94	5.28	
22	16.66		5.58		20	16.90	5.57	
130.40	CREST; June 30, 1951; 0243 GCT; 26°09'N, 114°07.5'W; sounding, 1200 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 15°.							
0	-		5.12	0.52	0	19.7	5.12	0.52
9	19.58		5.13	0.48	10	19.6	5.13	0.48
24	-		4.69	0.48	20	19.3	5.00	0.48
48	-		4.40	0.54	30	19.1	4.58	0.49
72	-		4.34	0.70	50	17.8	4.39	0.55
94	12.42		3.68	1.30	75	14.3	4.32	0.72
145	11.04		1.65	2.44	100	11.72	3.34	1.53
190	11.20		0.33	-	150	11.03	1.49	(2.50)
280	10.36		0.19	3.05	200	11.19	0.28	(2.84)
374	9.30		0.29	3.12	250	10.74	0.20	(3.00)
466	8.45		0.29	3.17	300	10.13	0.20	3.07
562	7.60		0.16	3.26	400	9.04	0.29	3.13
752	5.98	34.47	0.17	3.36	500	8.17	0.25	3.20
941	4.96		0.29	-	600	7.28	0.16	3.29
1142	4.26		0.44	3.41	700	6.44	0.16	3.34
					800	5.67	0.18	3.36
					1000	4.73	0.35	3.40

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; June 29, 1951; 2109, 2135 GCT; 25°48.5'N, 114°46'W; sounding, 1900 fm; wind, 320°, force 1; weather, partly cloudy; sea, moderate; wire angle, 04°, 06°.								130.50
0	-		4.86	0.52	0		4.86	0.52
10	18.12	33.62	4.94	0.60	10	18.12	4.94	0.60
25	-		5.11	0.63	20		5.04	0.62
49	-		5.35	0.65	30		5.17	0.64
72	-		5.26	0.78	50		5.35	0.65
96	12.48		4.03	1.30	75		5.24	0.82
148	11.60		1.53	2.46	100		3.75	1.41
					150	11.57	1.52	(2.47)
194	10.87		0.99	-	200	10.76	0.98	
288	9.01		0.84	-	250	9.68	0.88	
385	8.12		0.46	3.10	300	8.88	0.80	
483	7.18		0.23	3.26	400	7.99	0.42	3.13
582	6.23		0.21	3.36	500	7.00	0.20	3.28
778	5.12		0.28	3.48	600	6.08	0.22	3.38
973	4.25		0.42	3.50	700	5.50	0.26	3.44
					800	5.00	0.28	3.48
					1000	(4.14)	(0.47)	
CREST; June 29, 1951; 1405, 1440 GCT; 25°28'N, 115°23.5'W; sounding, 2050 fm; wind, calm; weather, overcast; sea, slight; wire angle, 25°, 35°.								130.60
0	-		5.23	-	0	18.2	5.23	
9	18.16		5.03	0.54	10	18.2	5.01	0.55
23	-		4.73	0.60	20	18.2	4.76	0.59
50	-		5.19	0.53	30	18.3	4.75	0.59
66	-		5.10	0.65	50	16.1	5.19	0.53
88	13.87		5.12	0.74	75	15.2	5.10	0.69
129	-		3.50	1.63	100	12.60	5.06	0.88
167	10.57		1.89	2.38	150	10.72	2.34	2.18
245	9.18		1.37	2.70	200	9.94	1.59	2.52
326	8.54		0.54	3.06	250	9.13	1.34	2.72
406	7.56		0.41	3.12	300	8.72	0.76	2.98
					400	7.63	0.42	3.11
469	7.02		0.40	3.29	500	6.78	0.39	3.35
641	5.74		0.29	3.48	600	6.03	0.29	3.46
819	4.90		0.36	3.42	700	5.43	0.30	3.48
1016	4.08		0.55	-	800	4.99	0.34	3.43
					1000	4.14	0.54	
CREST; June 30, 1951; 1126 GCT; 25°54.5'N, 113°07.5'W; sounding, 106 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.								133.30
0	18.04		5.74	0.63	0	18.04	5.74	0.63
14	16.30	33.81	6.03	0.60	10	16.86	6.01	0.60
28	13.85		4.78	1.17	20	15.25	6.02	0.67
43	13.45		4.58	1.36	30	13.76	4.75	1.20
57	11.82		2.15	2.04	50	12.86	4.40	1.72
70	11.38		1.92	2.26	75	11.40	1.65	2.36
84	11.52		1.24	2.50	100	11.60	0.86	2.60
97	11.60		0.94	2.58				
110	11.59		0.74	2.74				
124	11.58		0.60	2.76				
139	11.54		0.53	-				

SIO

CCOFI
5107

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
133.40	CREST; June 30, 1951; 1633 GCT; 25°34.5'N, 113°45.5'W; sounding, 1450 fm; wind, 320°, force 1; weather, cloudy; sea, slight; wire angle, 00°.							
0	-		5.80	0.62	0	17.8	5.80	0.62
10	15.63	33.69	6.00	0.63	10	15.63	6.00	0.63
25	-		4.80	1.22	20	13.8	5.50	1.00
49	-		3.15	1.92	30	13.4	4.44	1.40
73	-		1.37	2.46	50	11.8	3.15	1.96
97	11.45		0.79	2.72	75	11.5	1.28	2.49
149	11.29		0.33	2.90	100	11.44	0.75	2.73
197	11.22		0.20	3.03	150	11.28	0.33	2.90
292	10.42		0.15	2.77	200	11.20	0.19	3.03
392	9.80		0.28	-	250	10.85	0.15	2.89
489	9.00		0.15	3.18	300	10.35	0.15	2.77
589	7.57		0.29	-	400	9.75	0.27	2.96
788	5.46		0.29	3.44	500	8.88	0.15	(3.20)
983	4.05		0.56	3.43	600	7.43	0.29	(3.34)
1188	3.38		1.10	3.36	700	6.38	0.29	(3.41)
					800	5.35	0.30	3.44
					1000	3.98	0.60	3.43
133.50	CREST; June 30, 1951; 2215 GCT; 25°14.5'N, 114°24'W; sounding, 2050 fm; wind, 320°, force 3; weather, partly cloudy; sea, slight; wire angle, 17°.							
0	-		4.90	0.44	0	20.1	4.90	0.44
10	19.92	33.91	4.61	0.46	10	19.92	4.61	0.46
24	-		4.91	0.44	20	19.5	4.83	0.44
48	-		5.05	0.45	30	19.4	4.96	0.44
71	-		5.13	0.47	50	19.3	5.05	0.45
95	15.37		5.05	0.56	75	17.5	5.13	0.48
144	11.79		2.94	1.74	100	14.95	4.99	0.61
187	11.14		1.35	2.42	150	11.68	2.71	1.87
274	9.92		0.65	2.76	200	10.97	1.16	2.49
365	8.23		0.53	3.02	250	10.27	0.78	2.68
454	7.53		0.30	3.18	300	9.40	0.58	2.84
547	6.52		0.25	3.26	400	7.91	0.45	3.10
					500	7.08	0.25	3.22
137.35	CREST; July 1, 1951; 1430 GCT; 25°10'N, 113°04.5'W; sounding, 740 fm; wind, 310°, force 2; weather, overcast; sea, moderate; wire angle, 00°.							
0	-		4.91	0.63	0	16.7	4.91	0.63
10	16.52		5.07	0.68	10	16.52	5.07	0.68
25	-		5.10	0.66	20	15.5	5.09	0.66
49	-		3.94	1.39	30	15.3	5.07	0.68
73	-		0.57	2.91	50	13.2	3.75	1.45
97	13.29		0.36	2.92	75	13.9	0.55	2.91
148	12.16		0.25	2.98	100	13.17	0.34	2.92
195	11.63		0.25	3.04	150	12.13	0.25	2.98
289	10.68		0.11	-	200	11.58	0.25	(3.05)
389	9.64		0.17	3.20	250	11.08	0.17	(3.09)
483	8.50		0.14	3.33	300	10.57	0.11	(3.12)
583	7.07		0.20	-	400	9.52	0.16	3.21
779	-		0.25	3.62	500	8.29	0.14	(3.35)
972	4.35		0.45	3.59	600	(6.88)	0.21	(3.48)
1177	3.52		0.77	3.52	700	(5.98)	0.25	(3.58)
					800	(5.29)	0.25	3.62
					1000	4.22	0.50	3.58

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; July 1, 1951; 1040 GCT; 25°00'N, 113°23.5'W; sounding, 1540 fm; wind, 320°, force 2; weather, missing; sea, slight; wire angle, 27°. 137.40

0	-		5.47	0.59	0	17.4	5.47	0.59
9	17.17	33.55	5.46	0.60	10	17.1	5.47	0.60
22	-		5.60	0.61	20	16.0	5.59	0.60
43	-		5.50	0.69	30	15.1	5.59	0.63
62	-		5.24	0.81	50	14.6	5.41	0.72
80	12.56		4.51	1.08	75	13.0	4.76	0.98
120	11.12		2.70	-	100	11.72	3.74	1.57
156	10.50		1.99	2.26	150	10.59	2.09	2.20
227	9.96		0.82	2.72	200	10.14	1.19	2.57
306	9.15		0.47	-	250	9.77	0.66	2.80
379	8.08		0.39	3.01	300	9.24	0.49	2.92
459	6.92		0.39	3.20	400	7.75	0.39	3.05
621	-		0.24	3.19	500	(6.61)	0.34	3.20
790	4.98		0.31	3.43	600	(5.96)	0.25	3.18
982	4.28		0.44	3.40	700	(5.38)	0.25	3.30
					800	4.95	0.31	3.43
					1000	(4.23)	(0.45)	(3.40)

CREST; July 1, 1951; 0335, 0356, 0409 GCT; 24°40'N, 114°01.5'W; sounding, 2050 fm; wind, 320°, force 4; weather, cloudy; sea, moderate; wire angle, 10°, 10°, missing. 137.50

0	20.3		-	-	0	20.3		
10	20.02		4.55	0.44	10	20.02	4.55	0.44
24	-		5.07	0.46	20	19.5	5.05	0.46
48	-		4.95	0.44	30	19.3	5.07	0.46
72	-		4.78	0.44	50	19.3	4.95	0.44
					75	17.2	4.78	0.44
94	15.10		5.13	0.58	100	14.6	5.12	0.68
					150	11.73	2.25	2.14
144	11.87		2.50	2.01	200	11.04	1.05	(2.69)
190	11.16		1.17	2.62	250	10.49	0.66	(2.92)
281	10.16		0.48	-	300	9.93	0.41	(3.07)
376	8.86		0.26	3.20	400	8.56	0.24	3.22
471	7.74		0.23	3.26	500	7.37	0.21	3.29
565	6.51		0.21	3.38	600	(6.22)	0.22	3.40
758	-		0.34	3.44	700	(5.51)	0.27	3.42
949	4.40		0.51	3.49	800	(4.99)	0.38	3.45
					1000	(4.23)		

CREST; July 1, 1951; 0550 GCT;[a] 24°40'N, 114°01.5'W; sounding, 2050 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 08°. 137.50

657	-
681	-
704	-
729	-
753	-
777	5.27
801	4.98
825	4.89
848	4.76
874	4.66
897	4.58
922	4.48
948	-
971	4.33
995	4.23

a) Test cast.

S10

CCOFI 5108

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
40.38	BLACK DOUGLAS; August 15, 1951; 0120 GCT; 41°47'N, 124°28'W; sounding, 85 fm; wind, 350°, force 7; weather, clear; sea, high; wire angle, 17°.							
0	9.58		4.38	-	0	9.58	4.38	
10	9.58	33.77	4.27	2.31	10	9.58	4.27	
24	9.58		4.20	2.36	20	9.57	4.22	
47	9.19		4.03	-	30	9.54	4.18	
70	7.88		2.95	-	50	8.95	3.98	
94	8.01		2.14	-	75	7.88	2.72	
					100	(8.07)	(2.00)	
40.40	BLACK DOUGLAS; August 14, 1951; 2313 GCT; 41°43'N, 124°38'W; sounding, 370 fm; wind, 350°, force 7; weather, clear; sea, high; wire angle, 03°.							
0	-			1.44	0	11.1		1.44
10	11.04	33.18		1.40	10	11.04		1.40
25	-			1.45	20	10.9		1.42
50	-			1.99	30	10.6		1.62
74	-			-	50	8.7		1.99
98	7.70			2.28	75	8.0		2.17
149	7.26			2.38	100	7.7		2.29
195	6.84			2.49	150	7.25		2.38
242	6.55			2.68	200	6.81		2.50
289	-			2.88	250	6.51		2.71
340	5.98			-	300	6.22		2.91
388	5.60			3.02	400	5.53		3.02
436	5.34			-	500	5.21		(3.23)
484	5.24			3.22	600	(4.88)		
589	4.92			-				
40.50	BLACK DOUGLAS; August 14, 1951; 1420 GCT; 41°23'N, 125°23'W; sounding, 1680 fm; wind, 350°, force 6; weather, clear; sea, very rough; wire angle, 12°.							
0	-		5.67	0.85	0	13.9	5.67	0.85
10	13.73	32.75	6.19	0.86	10	13.73	6.19	0.86
24	-		6.04	-	20	13.6	6.07	0.90
48	-		6.05	1.22	30	13.2	6.05	0.99
72	-		6.48	1.71	50	11.5	6.07	1.27
94	8.69		4.70	1.98	75	9.7	6.48	1.76
142	7.95		3.38	-	100	8.5	4.43	2.04
186	7.41		2.70	2.49	150	7.83	3.24	2.39
273	6.61		2.21	2.73	200	7.26	2.59	2.53
364	-		1.39	-	250	6.81	2.35	2.67
451	5.39		0.95	3.25	300	6.40	2.00	2.83
544	4.98		0.65	3.44	400	5.72	1.17	3.16
728	4.32		0.61u	-	500	5.16	0.77	3.36
915	3.91		0.45	3.52	600	4.76		(3.46)
1113	3.34		0.55	3.52	700	4.42		(3.47)
					800	4.15		(3.49)
					1000	3.67	0.46	3.52

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

40.60 BLACK DOUGLAS; August 14, 1951; 0635 GCT; 41°03'N, 126°09'W; sounding, 1620 fm; wind, 350°, force 4; weather, clear; sea, very rough; wire angle, 07°.

0	-		5.82	0.85	0	13.8	5.82	0.85
10	13.80	32.84	5.97	0.89	10	13.80	5.97	0.89
25	-		5.95	0.91	20	13.7	5.98	0.91
55	-		5.55	1.68	30	12.1	5.90	0.92
78	-		5.44	2.16	50	8.9	5.60	1.52
107	7.98		4.84	2.38	75	8.4	5.44	2.13
158	7.55		2.55	2.54	100	8.1	5.06	2.34
209	7.03		2.29	2.58	150	7.64	2.70	2.52
309	6.08		1.31	-	200	7.11	2.33	2.57
416	-		0.68	3.20	250	6.62	1.83	(2.75)
517	5.04		0.83	3.38	300	6.13	1.37	(3.00)
620	4.65		0.43	3.47	400	5.57	0.72	(3.18)
819	4.00		0.34	-	500	5.11	0.81	3.36
1023	3.49		0.50	3.54	600	4.71	0.49	3.46
1224	3.01		0.71	-	700	4.38	0.37	(3.52)
					800	4.06	0.35	(3.54)
					1000	3.54	0.47	(3.54)

40.70 BLACK DOUGLAS; August 13, 1951; 2323 GCT; 40°42'N, 126°55'W; sounding, 1660 fm; wind, 350°, force 4; weather, clear; sea, rough; wire angle, 33°.

0	-		5.84	0.64	0	15.8	5.84	0.64
8	15.72	32.75	5.80	-	10	15.7	5.82	0.70
21	-		6.48	0.90	20	15.5	6.48	0.89
46	-		6.28	1.21	30	12.7	6.43	1.03
67	-		6.14	1.36	50	7.9	6.26	1.25
92	8.06		5.07	1.76	75	8.3	6.02	1.46
136	7.96		3.76	1.73	100	8.0	4.67	1.76
178	7.59		2.84	-	150	7.86	3.43	(1.80)
258	6.74		2.03	2.44	200	7.36	2.52	(2.07)
342	-		1.38	2.76	250	6.82	2.09	(2.39)
422	5.64		1.11	2.88	300	6.42	1.69	2.63
502	5.18		0.64	3.20	400	5.77	1.17	2.85
661	4.54		0.36	3.46	500	5.18	0.66	3.19
837	4.07		0.34	-	600	4.76	0.39	3.40
1025	3.59		1.16u	-	700	4.42	0.36	
					800	4.16	0.35	
					1000	3.66		

40.80 BLACK DOUGLAS; August 13, 1951; 1607 GCT; 40°23'N, 127°40'W; sounding, 730 fm; wind, 350°, force 4; weather, cloudy; sea, rough; wire angle, 04°.

0	-		5.66	0.60	0	16.4	5.66	0.60
10	16.39	32.27	5.68	-	10	16.39	5.68	0.56
25	-		5.62	0.64	20	16.4	5.62	0.61
50	-		6.20	0.82	30	16.4	5.70	0.67
73	-		5.74	1.27	50	12.5	6.20	0.82
97	9.23		5.42	1.54	75	9.8	5.69	1.30
148	8.10		4.37	2.00	100	9.2	5.39	1.56
193	7.53		3.04	2.26	150	8.05	4.31	2.02
285	6.60		2.23	-	200	7.45	2.96	(2.30)
380	5.76		1.41	2.97	250	6.94	2.54	(2.52)
471	5.30		0.94	3.23	300	6.46	2.09	(2.69)
568	4.94		0.58	3.42	400	5.62	1.29	3.03
758	4.25		0.40	-	500	5.19	0.81	3.30
947	3.64		0.51	3.48	600	4.82	0.53	(3.45)
1148	3.04		0.71	3.41	700	4.46	0.43	(3.47)
					800	4.09	0.42	(3.48)
					1000	3.49	0.55	3.47

43.42 BLACK DOUGLAS; August 15, 1951; 0816 GCT; 41°04'N, 124°20.5'W; sounding, 85 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 05°.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
0	12.73			1.12	0	12.73		1.12
10	10.47			-	10	10.47		1.44
25	8.84			1.68	20	9.09		1.60
49	8.57			1.98	30	8.76		1.74
74	8.57			2.28	50	8.57		1.99
98	8.19			2.30	75	8.57		2.29
					100	(8.15)		(2.30)

43.42 BLACK DOUGLAS; August 15, 1951; 0956 GCT;[a] 41°04'N, 124°20.5'W; sounding, 85 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 05°.

0	12.53			
10	11.00	33.04		
25	8.85			
40	9.19			
50	9.26			
70	8.75			
90	8.54			
100	8.48			
114	8.38			
129	8.27			
139	8.22			

43.50 BLACK DOUGLAS; August 15, 1951; 1511 GCT; 40°48'N, 124°57'W; sounding, 1540 fm; wind, 350°, force 3; weather, fog; sea, rough; wire angle, 26°.

0	-		6.11	1.29	0	11.1	6.11	1.29
9	11.05	33.03	6.06	1.30	10	11.0	6.06	1.31
22	-		6.19	1.44	20	10.5	6.19	1.42
49	-		4.87	1.80	30	9.9	6.14	1.58
70	-		3.77	2.15	50	9.3	4.79	1.81
95	8.02		3.50	2.20	75	8.6	3.70	2.16
135	7.84		2.88	2.28	100	8.0	3.46	2.21
177	7.52		2.45	2.42	150	7.71	2.73	2.32
258	6.95		1.61	2.78	200	7.36	2.20	2.54
343	5.94		1.49	2.83	250	7.01	1.65	2.77
425	5.54		1.06	3.16	300	6.37	1.56	2.81
506	5.26		0.72	3.28	400	5.65	1.18	3.07
664	4.49		0.39	3.43	500	5.28	0.74	3.27
840	4.06		0.38	-	600	4.79	0.47	3.38
1029	3.55		-	-	700	4.38	0.39	
					800	4.14	0.39	
					1000	3.64		

43.60 BLACK DOUGLAS; August 15, 1951; 2057 GCT; 40°28'N, 125°43'W; sounding, 1620 fm; wind, 340°, force 4; weather, overcast; sea, very rough; wire angle, 13°.

0	-		5.95	1.34	0	11.4	5.95	1.34
10	11.40	33.06	6.05	1.36	10	11.40	6.05	1.36
24	-		6.16	1.42	20	11.0	6.17	1.40
48	-		5.55	1.68	30	10.9	6.13	1.47
72	-		4.77	2.02	50	9.4	5.42	1.73
95	8.39		4.25	2.15	75	8.7	4.68	2.04
143	7.80		3.17	-	100	8.3	4.14	2.17
185	7.58		2.33	2.48	150	7.75	2.98	2.33
272	7.07		1.62	-	200	7.51	2.16	(2.53)
363	5.94		1.39	3.00	250	7.24	1.74	(2.66)
449	5.36		0.99	3.22	300	6.75	1.54	(2.79)
543	4.94		0.61	-	400	5.66	1.23	3.09
727	4.48		0.40	3.44	500	5.11	0.76	(3.28)
915	3.75		0.45	3.44	600	4.77	0.49	(3.36)
1116	3.28		1.23	2.92u	700	4.54	0.40	(3.43)
					800	4.23	0.40	3.44
					1000	3.51	0.73	

a) Bathythermograph calibration cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; August 16, 1951; 1256 GCT; 40°14'N, 124°32'W; sounding, 160 fm; wind, 340°, force 8; weather, fog; sea, high; wire angle, 05°.								47.50
0	8.93		3.50	2.18	0	8.93	3.50	2.18
10	8.94	33.78	3.48	2.22	10	8.94	3.48	2.22
25	8.92		3.38	2.26	20	8.93	3.43	2.25
50	8.86		3.09	2.32	30	8.92	3.35	2.28
74	8.53		2.83	-	50	8.86	3.09	2.32
98	8.30		2.61	2.44	75	8.52	2.81	2.35
					100	(8.29)	(2.60)	(2.45)
BLACK DOUGLAS; August 16, 1951; 0325, 0345 GCT; 39°54'N, 125°18'W; sounding, 1520 fm; wind, 340°, force 6; weather, overcast; sea, very rough; wire angle, 16°, 12°.								47.60
0	-		6.15	0.94	0	13.4	6.15	0.94
10	13.40	33.06	6.15	0.97	10	13.40	6.15	0.97
					20	13.3	6.48	1.07
24	-		6.50	-	30	13.3	6.47	1.24
48	-		4.73	1.41	50	9.6	4.74	1.43
72	-		5.26	1.62	75	9.7	5.25	1.64
97	9.34		4.75	2.02	100	9.3	4.65	2.06
146	7.98		3.18	2.26	150	7.92	3.08	2.27
194	7.53		2.51	2.34	200	7.47	2.44	2.35
286	6.49		1.81	2.74	250	6.88	2.00	2.55
384	5.71		1.38	3.05	300	6.36	1.75	2.80
477	5.51		0.77	-	400	5.65	1.27	3.10
576	4.83		0.62	3.43	500	5.41	0.72	3.34
769	4.42		0.39	3.52	600	4.74	0.58	3.45
962	3.76		0.48	3.38	700	4.53	0.45	3.50
1164	3.19		0.82	3.24	800	4.34	0.40	3.51
					1000	3.63	0.53	3.36
BLACK DOUGLAS; August 11, 1951; 1037 GCT; 39°46'N, 123°54'W; sounding, 63 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 05°.								50.47
0	9.81		4.86	1.72	0	9.81	4.86	1.72
10	8.90	33.56	3.80	2.07	10	8.90	3.80	2.07
25	8.66		3.57	2.10	20	8.68	3.61	2.08
50	8.63		2.47	2.38	30	8.65	3.51	2.12
74	8.60		2.14	-	50	8.63	2.47	2.38
98	8.54		2.15	2.48	75	8.60	2.14	2.47
					100	(8.53)	(2.16)	(2.48)
BLACK DOUGLAS; August 11, 1951; 1329 GCT; 39°40'N, 124°08'W; sounding, 540 fm; wind, 330°, force 7; weather, clear; sea, high; wire angle, 14°.								50.50
0	-		5.46	1.72	0	9.9	5.46	1.72
10	9.90	33.51	5.46	-	10	9.90	5.46	1.76
24	-		4.78	1.96	20	9.6	5.21	1.92
48	-		3.42	2.27	30	8.8	4.16	2.08
72	-		3.05	2.27	50	8.8	3.36	2.27
95	8.08		2.83	2.36	75	8.2	3.03	2.28
144	7.76		2.17	-	100	8.1	2.76	2.38
189	7.47		1.69	2.72	150	7.72	2.11	2.63
278	6.93		1.43	-	200	7.40	1.65	(2.75)
373	6.21		1.39	2.94	250	7.09	1.50	(2.87)
464	5.64		0.90	3.16	300	6.77	1.40	(2.94)
561	5.15		0.64	3.30	400	6.02	1.28	2.98
655	4.57		0.51	-	500	5.44	0.79	3.21
756	4.46		0.45	3.40	600	4.88	0.57	3.35
854	4.21		-	-	700	4.50	0.47	3.40
					800	4.36		

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

50.60 BLACK DOUGLAS; August 12, 1951; 0039, 0152 GCT; 39°20'N, 124°52'W; sounding, 1620 fm; wind, 320°, force 7; weather, clear; sea, high; wire angle, 02°, 03°.

0	-		5.66	1.06	0	11.4	5.66	1.06
10	11.30	32.84	5.81	-	10	11.30	5.81	1.05
25	-		5.89	1.07	20	11.1	5.88	1.06
50	-		5.73	1.11	30	10.6	5.89	1.08
75	-		5.19	1.47	50	9.7	5.73	1.11
98	9.49		4.68	1.88	75	8.5	5.19	1.47
151	8.37		2.49	2.38	100	9.4	4.58	1.90
198	7.78		2.31	2.39	150	8.40	2.50	2.38
292	7.20		1.38	-	200	7.76	2.26	(2.40)
389	6.36		1.04	3.04	250	7.42	1.69	(2.67)
483	5.96		0.57	-	300	7.14	1.34	(2.88)
583	5.50		0.45	-	400	6.29	0.98	
778	4.43		0.42	3.39	500	5.88	0.54	
					600	5.41	0.44	
771a)	4.34		-	-	700	4.89	0.42	
963	3.82		0.39	-	800	4.34	0.41	
1163	3.40		0.70	-	1000	3.74	0.41	

50.70 BLACK DOUGLAS; August 12, 1951; 1126 GCT; 39°00'N, 125°36.5'W; sounding, 2120 fm; wind, 340°, force 5; weather, clear; sea, very rough; wire angle, 01°.

0	-		5.79	1.24	0	11.4	5.79	1.24
10	11.37	33.00	5.86	1.24	10	11.37	5.86	1.24
25	-		5.78	1.23	20	11.4	5.81	1.23
50	-		5.60	1.38	30	11.4	5.75	1.24
74	-		5.03	1.87	50	11.4	5.60	1.38
98	9.26		4.48	2.04	75	10.1	5.00	1.88
151	8.52		3.27	2.34	100	9.2	4.42	2.06
198	7.63		2.65	2.46	150	8.53	3.28	2.34
293	6.45		1.86	2.88	200	7.58	2.64	2.47
392	5.62		1.18	3.26	250	6.94	2.18	2.70
487	5.07		0.79	3.44	300	6.37	1.81	2.91
587	4.82		0.45	-	400	5.56	1.13	3.29
783	4.32		0.38	-	500	5.02	0.74	(3.46)
977	3.76		0.43	3.56	600	4.80	0.43	
1180	3.23		0.60	-	700	4.55	0.40	
					800	4.27	0.38	
					1000	3.70	0.44	

50.80 BLACK DOUGLAS; August 12, 1951; 1752 GCT; 38°40'N, 126°21'W; sounding, 2360 fm; wind, 340°, force 6; weather, clear; sea, high; wire angle, 07°.

0	-		5.47	0.66	0	15.8	5.47	0.66
10	15.80	32.74	5.53	0.62	10	15.80	5.53	0.62
25	-		5.45	0.68	20	15.8	5.48	0.64
50	-		5.53	0.68	30	15.7	5.45	0.68
74	-		5.69	0.90	50	15.5	5.53	0.68
98	11.04		5.69	1.22	75	13.4	5.71	0.92
150	9.07		5.32	-	100	11.0	5.69	1.26
196	8.70		4.82	2.10	150	9.07	5.32	1.73
290	7.78		2.48	2.50	200	8.67	4.75	2.13
388	6.38		1.95	2.86	250	8.21	3.30	2.37
481	5.90		1.04	3.27	300	7.64	2.38	2.54
580	5.12		0.74	3.44	400	6.29	1.86	2.91
774	4.35		0.36	3.56	500	5.77	0.99	3.33
967	3.80		0.48	3.58	600	5.02	0.69	3.46
1170	3.25		0.65	-	700	4.61	0.44	3.53
					800	4.26	0.37	3.57
					1000	3.71	0.51	(3.58)

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

BLACK DOUGLAS; August 11, 1951; 0259 GCT; 39°02'N, 123°57'W; sounding, 59 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 04°. 53.52

0	-		6.09	1.25	0	10.1	6.09	
10	10.11	33.53	6.13	-	10	10.11	6.13	
25	9.33		3.86	-	20	9.51	5.27	
50	8.84		2.25	2.48	30	9.18	3.20	
74	8.62		1.89	-	50	8.84	2.25	
98	8.57		2.02	2.48	75	8.61	1.89	
					100	(8.56)	(2.05)	

BLACK DOUGLAS; August 11, 1951; 0000 GCT; 38°56'N, 124°04.5'W; sounding, 690 fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 14°. 53.55

0	-		5.39	1.57	0	10.1	5.39	1.57
10	10.12	33.37	5.33	1.57	10	10.12	5.33	1.57
24	-		5.38	1.56	20	10.1	5.36	1.56
48	-		4.50	-	30	9.5	5.37	1.56
72	-		3.95	2.07	50	9.1	4.46	1.88
96	8.43		3.32	2.16	75	8.7	3.89	2.08
147	8.04		2.56	2.32	100	8.4	3.26	2.17
193	7.77		2.07	-	150	8.02	2.51	(2.33)
275p	7.12		1.64	-	200	7.71	2.02	(2.45)
383	6.27		1.13	3.02	250	7.33	1.75	(2.59)
475	5.61		0.82	3.32	300	6.91	1.50	(2.75)
574	5.25		0.54	-	400	6.14	1.06	3.08
766	4.44		0.37	3.39	500	5.50	0.74	(3.35)
958	3.82		0.48	3.42	600	5.14	0.50	(3.39)
1160	3.25		0.67	3.40	700	4.71	0.40	(3.39)
					800	4.31	0.38	3.39
					1000	3.70	0.52	3.42

BLACK DOUGLAS; August 10, 1951; 1509 GCT; 38°36'N, 124°48.5'W; sounding, 2080 fm; wind, 330°, force 7; weather, drizzle; sea, high; wire angle, 20°. 53.65

0	-		6.23	-	0	13.5	6.23	
9	13.46	33.14	5.53u	0.99	10	13.5		0.99
23	-		6.14	1.02	20	13.5		1.00
48	-		6.02	1.41	30	13.3	6.12	1.11
70	-		5.17	2.06	50	10.9	5.99	1.51
93	8.68		3.93	2.13	75	9.1	4.77	2.08
143	7.70		3.33	2.28	100	8.5	3.77	2.14
188	7.50		2.53	2.57	150	7.64	3.24	2.32
274	6.50		1.66	2.81	200	7.44	2.33	2.62
365	5.69		1.26	3.12	250	6.88	1.80	2.76
451	5.48		0.79	-	300	6.21	1.55	2.91
545	5.00		0.53	-	400	5.58	1.10	
731	4.21		0.39	3.40	500	5.27	0.66	
916	3.69		0.46	-	600	4.74	0.44	
1117	3.24		0.58	3.37	700	4.32	0.40	
					800	3.99	0.40	
					1000	3.48	0.54	

BLACK DOUGLAS; August 9, 1951; 1032 GCT; 38°30'N, 123°22'W; sounding, 61 fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 18°. 57.51

0	10.80		5.82	1.53	0	10.80	5.82	1.53
9	10.76	33.65	5.96	1.54	10	10.74	5.95	(1.55)
23	9.09		3.57	-	20	9.14	3.82	(1.69)
47	8.91		3.00	2.12	30	9.03	3.33	(2.02)
70	8.72		2.59	2.36	50	8.87	2.93	2.17
93	8.55		2.19	2.48	75	8.68	2.49	2.40
					100	(8.50)	(2.07)	(2.51)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
57.55	BLACK DOUGLAS; August 9, 1951; 1428 GCT; 38°22'N, 123°39.5'W; sounding, 480 fm; wind, 320°, force 6; weather, drizzle; sea, high; wire angle, 00°.							
0	-		5.96	1.38	0	11.1	5.96	1.38
10	11.12	33.37	6.02	1.36	10	11.12	6.02	1.36
25	-		5.87	1.47	20	11.0	5.90	1.40
50	-		5.68	-	30	10.8	5.86	(1.52)
75	-		4.35	-	50	10.6	5.68	(1.68)
99	9.06		3.52	2.14	75	9.6	4.35	(1.95)
151	8.52		2.90	2.10	100	9.0	3.50	2.15
198	7.88		2.47	2.11	150	8.53	2.91	2.10
291	7.23		1.70	2.31	200	7.86	2.44	2.11
389	6.36		1.17	2.98	250	7.49	2.02	2.20
483	5.88		0.76	-	300	7.15	1.64	2.35
583	5.31		0.57	3.20	400	6.29	1.12	3.00
680	4.88		0.36	3.31	500	5.79	0.72	3.10
783	4.30		0.41	3.38	600	5.22	0.52	3.21
883	4.24		-	-	700	4.76	0.35	3.33
					800	4.27		
57.65	BLACK DOUGLAS; August 9, 1951; 2256 GCT; 38°02'N, 124°23.5'W; sounding, 2160 fm; wind, 320°, force 7; weather, overcast; sea, high; wire angle, 08°.							
0	-		6.12	1.00	0	12.4	6.12	1.00
10	12.44	33.12	6.23	0.96	10	12.44	6.20	0.96
25	-		6.14	-	20	12.3	6.20	1.04
50	-		5.57	1.54	30	11.1	6.01	1.24
74	-		5.13	1.82	50	10.4	5.57	1.54
97	9.09		3.90	-	75	9.6	5.09	1.83
146	8.48		2.62	2.24	100	9.2	3.74	1.96
190	8.12		2.20	2.37	150	8.43	2.57	2.26
278	7.17		1.62	2.70	200	8.03	2.13	2.39
371	6.41		1.20	-	250	7.49	1.79	2.58
459	5.89		0.76	-	300	6.98	1.52	
552	5.50		0.43	3.32	400	6.23	1.04	
737	4.62		0.37	-	500	5.71	0.58	
923	4.14		0.55	3.34	600	5.27	0.40	
1123	3.62		0.62	-	700	4.78	0.38	
					800	4.43	0.40	
					1000	3.94	0.60	
60.55	BLACK DOUGLAS; August 7, 1951; 1855 GCT; 37°47.5'N, 123°15'W; sounding, 57 fm; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 04°.							
0	11.42		5.12	1.19	0	11.42	5.12	1.19
10	11.44		5.50	1.16	10	11.44	5.50	1.16
25	11.34		5.55	1.18	20	11.40	5.55	1.17
49	9.99		4.86	1.76	30	11.21	5.50	1.21
74	9.44		3.30	-	50	9.92	4.77	(1.78)
					75	(9.43)	(3.24)	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; August 7, 1951; 1333, 1509 GCT; 37°37'N, 123°37'W; sounding, 1840 fm; wind, 330°, force 6; weather, overcast; sea, high; wire angle, 12°, 14°.								60.60
0	-		5.93	0.85	0	13.1	5.93	0.85
10	13.09	33.30	6.05	0.88	10	13.09	6.05	0.88
24	-		6.06	0.86	20	13.0	6.08	0.86
49	-		4.50	-	30	12.7	6.01	1.00
73	-		3.71	2.03	50	10.7	4.48	1.76
97	8.98		3.29	2.12	75	9.5	3.66	2.04
149	8.42		2.63	2.36	100	8.9	3.25	2.13
195	7.92		2.74	-	150	8.42	2.62	(2.37)
287	6.99		1.24	-	200	7.86	2.74	
385	6.43		0.84	3.22	250	7.34	1.77	
478	6.02		0.68	3.28	300	6.89	1.18	
576	5.42		0.49	3.37	400	6.36	0.81	3.18
768	4.71		0.37	3.46	500	5.91	0.65	3.29
					600	5.30	0.44	3.39
967	4.06		0.49	3.45	700	4.92	0.36	3.44
1166	3.46		0.81	3.14	800	4.59	0.36	3.46
					1000	3.95	0.54	3.42
BLACK DOUGLAS; August 7, 1951; 0602 GCT; 37°17'N, 124°21'W; sounding, 2175 fm; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 07°.								60.70
0	-		5.73	0.60	0	14.6	5.73	0.60
10	14.62	33.02	5.66	0.57	10	14.62	5.66	0.57
25	-		5.63	0.61	20	14.6	5.64	0.59
50	-		5.57	0.96	30	14.5	5.63	0.65
74	-		4.70	1.62	50	12.4	5.57	0.96
98	9.35		3.91	-	75	9.5	4.51	(1.63)
151	8.16		3.14	2.20	100	9.3	3.84	(1.86)
198	7.68		3.11	2.21	150	8.18	3.15	(2.19)
289	6.50		2.07	2.64	200	7.66	3.10	2.22
391	5.59		1.33	3.10	250	7.02	2.52	2.43
485	5.44		0.86	3.15	300	6.38	2.00	2.70
586	4.89		0.47	3.32	400	5.56	1.26	3.11
782	4.28		0.39	-	500	5.40	0.76	3.18
977	3.70		0.54	3.41	600	4.83	0.44	(3.33)
1180	3.24		0.84	-	700	4.50	0.40	(3.40)
					800	4.22	0.40	(3.42)
					1000	3.63	0.57	(3.41)
BLACK DOUGLAS; August 6, 1951; 2205 GCT; 36°57'N, 125°04'W; sounding, 2300 fm; wind, 330°, force 5; weather, cloudy; sea, very rough; wire angle, 18°.								60.80
0	-		5.65	0.60	0	14.9	5.65	0.60
10	14.88	33.01	5.70	0.57	10	14.88	5.70	0.57
23	-		5.84	0.58	20	14.8	5.81	0.58
47	-		5.94	1.06	30	14.7	5.90	0.61
71	-		4.90	1.83	50	12.2	5.93	1.21
93	8.65		4.08	2.08	75	9.5	4.57	1.90
142	8.32		2.67	2.32a)	100	8.6	3.87	2.12
185	7.98		2.18	2.42	150	8.27	2.55	2.34
273	6.82		1.63	2.80	200	7.82	2.07	2.47
364	6.12		1.05	3.08	250	7.13	1.74	2.70
451	5.64		0.76	3.28	300	6.58	1.49	2.89
545	5.23		0.50	-	400	5.92	0.89	3.18
729	4.44		0.42	3.40	500	5.43	0.62	(3.32)
915	3.92		0.49	3.42	600	5.00	0.44	(3.37)
1115	3.40		0.70	3.34	700	4.57	0.41	(3.40)
					800	4.22	0.43	3.41
					1000	3.70	0.55	3.41

a) This phosphate sample was listed out of order on the data sheet; present order is assumed to be correct, but these phosphate data must be considered doubtful.

S10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
60.90	BLACK DOUGLAS; August 6, 1951; 1512 GCT; 36°37'N, 125°47'W; sounding, 2440 fm; wind, 340°, force 4; weather, partly cloudy; sea, very rough; wire angle, 22°.							
0	-		5.69	0.58	0	15.9	5.69	0.58
10	15.88	32.86	5.67	0.60	10	15.88	5.67	0.60
23	-		5.72	-	20	15.9	5.70	(0.61)
51	-		6.14	0.94	30	15.5	5.80	(0.66)
73	-		6.12	-	50	12.4	6.14	(0.93)
99	9.28		6.23	1.52	75	9.9	6.11	1.18
147	8.42		3.72	2.14	100	9.3	6.22	1.55
192	7.75		3.49	-	150	8.40	3.68	(2.17)
281	6.85		2.25	2.60	200	7.66	3.45	
375	5.71		1.60	-	250	7.13	2.61	
467	5.22		0.99	-	300	6.63	2.11	
559	5.04		0.45	3.32	400	5.55	1.43	
744	4.42		0.35	-	500	5.12	0.78	
951	3.88		0.51	-	600	4.93	0.40	
1150	3.38		0.73	-	700	4.59	0.35	
					800	4.25	0.35	
					1000	3.75	0.58	
63.52	BLACK DOUGLAS; August 2, 1951; 0543 GCT; 37°19'N, 122°36'W; sounding, 48 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 04°.							
0	12.51		7.19	0.50	0	12.51	7.19	0.50
10	12.50	33.45	7.41	0.32	10	12.50	7.41	0.32
25	12.44		7.60	0.35	20	12.46	7.55	0.33
50	11.95		5.33	1.25	30	12.40	7.50	0.42
74	9.38		3.34	2.12	50	11.95	5.33	1.25
					75	(9.28)	(3.32)	(2.14)
63.55	BLACK DOUGLAS; August 2, 1951; 0824 GCT; 37°13'N, 122°49.5'W; sounding, 135 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 07°.							
0	12.27		5.76	-	0	12.27	5.76	
10	12.28	33.36	5.96	0.80	10	12.28	5.96	0.80
25	10.53		4.78	1.41	20	11.05	5.12	0.92
49	9.76		3.61	1.76	30	10.32	4.43	1.52
74	9.39		2.85	-	50	9.73	3.59	1.76
150	8.98		2.50	2.02	75	9.38	2.83	1.80
198	8.72		2.21	-	100	9.24	2.64	1.87
					150	8.98	2.50	2.02
					200	(8.70)	(2.20)	(2.23)
63.65	BLACK DOUGLAS; August 2, 1951; 1535 GCT; 36°53'N, 123°32'W; sounding, 1940 fm; wind, 330°, force 5; weather, overcast; sea, very rough; wire angle, 28°.							
0	-		5.52	0.64	0	14.0	5.52	0.64
9	14.03	33.11	5.79	0.56	10	14.0	5.80	0.56
22	-		5.90	0.64	20	13.6	5.89	0.62
48	-		5.39	-	30	13.5	5.86	(0.81)
70	-		4.71	-	50	12.3	5.26	(1.20)
96	9.50		3.65	1.87	75	10.3	4.55	(1.71)
141	8.80		2.88	-	100	9.4	3.45	1.89
186	8.12		2.57	2.17	150	8.65	2.81	2.06
277	7.09		1.87	-	200	7.94	2.45	(2.22)
371	-		1.16	2.97	250	7.38	2.06	(2.47)
462	5.68		0.73	-	300	6.88	1.67	(2.71)
554	5.21		0.46	-	400	6.11	0.99	
740	4.49		0.41	3.43	500	5.49	0.58	
932	3.98		0.55	3.22	600	5.00	0.43	
1127	3.54		0.70	-	700	4.63	0.40	
					800	4.30	0.45	
					1000	3.80	0.60	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

67.50

BLACK DOUGLAS; August 3, 1951; 0845 GCT; 36°49'N, 122°04.5'W; sounding, 58 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 00°.

0	12.28		6.54	-	0	12.28	6.54	
10	12.26	33.44	6.71	0.70	10	12.26	6.71	0.70
25	10.86		4.92	1.54	20	11.60	5.85	1.10
50	10.02		3.88	1.82	30	10.60	4.55	1.63
75	9.46		3.78	-	50	10.02	3.88	1.82
					75	9.46	3.78	

67.55

BLACK DOUGLAS; August 3, 1951; 0428 GCT; 36°39'N, 122°26'W; sounding, 1140 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 24°.

0	-		5.96	0.56	0	14.2	5.96	0.56
9	14.21	33.19	5.76	-	10	14.2	5.74	0.60
23	-		5.36	0.66	20	13.7	5.38	0.64
49	-		6.08	1.25	30	13.1	5.50	0.71
72	-		4.42	1.78	50	11.3	6.07	1.33
99	9.32		3.82	1.95	75	9.8	4.35	1.81
145	8.60		2.87	-	100	9.3	3.80	1.96
190	7.95		2.92	2.08	150	8.53	2.89	2.14
283	6.96		1.89	-	200	7.82	2.83	(2.11)
380	-		1.13	2.78	250	7.28	2.28	(2.30)
472	5.59		0.76	-	300	6.80	1.74	(2.50)
568	5.28		0.56	3.28	400	6.07	1.03	2.82
755	4.70		0.35	3.36	500	5.48	0.69	3.13
951	3.98		0.51	-	600	5.19	0.51	3.30
1148	3.44		0.68	3.22	700	4.89	0.39	3.34
					800	4.55	0.36	3.36
					1000	3.82	0.56	3.30

67.65

BLACK DOUGLAS; August 2, 1951; 2136 GCT; 36°19'N, 123°09'W; sounding, 1800 fm; wind, 320°, force 4; weather, overcast; sea, very rough; wire angle, 12°.

0	-		5.64	0.60	0	14.8	5.64	0.60
10	14.76	33.19	5.40	0.58	10	14.76	5.40	0.58
24	-		5.32	0.65	20	14.7	5.33	0.61
49	-		5.15	1.28	30	14.3	5.29	0.75
73	-		4.11	1.20u	50	11.7	5.15	1.31
96	9.26		3.43	2.04	75	9.8	4.00	
147	8.68		2.48	-	100	9.2	3.31	2.06
193	8.11		2.28	2.30	150	8.64	2.45	2.21
284	7.32		1.39	-	200	8.03	2.24	(2.31)
380	-		1.05	2.78	250	7.59	1.64	(2.42)
471	6.03		0.63	-	300	7.20	1.34	(2.55)
568	5.35		0.48	3.10	400	6.50	0.93	2.83
757	4.64		0.35	-	500	5.84	0.56	3.01
946	4.08		0.49	3.48	600	5.18	0.44	(3.15)
1146	3.54		0.72	3.30	700	4.82	0.37	(3.30)
					800	4.51	0.37	(3.43)
					1000	3.93	0.55	3.43

70.51

BLACK DOUGLAS; August 3, 1951; 1459 GCT; 36°10.5'N, 121°45.5'W; sounding, 140 fm; wind, 320°, force 3; weather, cloudy; sea, rough; wire angle, 10°.

0	11.41		5.28	-	0	11.41	5.28	
10	11.42	33.40	5.31	-	10	11.42	5.31	
25	10.66		4.63	1.59	20	11.06	5.21	1.50
49	9.85		3.88	1.84	30	10.43	4.36	1.66
72	9.58		3.58	-	50	9.84	3.87	1.85
96	9.30		3.21	2.06	75	9.55	3.52	1.99
145	8.62		2.08	2.24	100	9.24	3.14	2.07
192	8.52		2.84u	2.34	150	8.59	(1.92)	2.26
					200	(8.52)		(2.35)

	OBSERVED				INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
70.60	BLACK DOUGLAS; August 5, 1951; 0300 GCT; 35°53'N, 122°23'W; sounding, 1670 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 20°.							
	0	-		5.62	0.80	0	13.8	5.62	0.80
	10	13.39	33.25	5.92	-	10	13.39	5.92	
	24	-		5.62	-	20	12.6	5.81	
	52	-		4.47	1.63	30	11.6	5.35	
	75	-		3.31	1.99	50	9.8	4.63	
	102	9.23		3.04	2.18	75	9.7	3.31	1.99
	150	8.71		1.97	-	100	9.3	3.06	2.16
	198	8.45		1.88	-	150	8.71	1.97	2.37
	294	7.81		1.07	2.70	200	8.43	1.87	2.42
	394	6.96		1.05	-	250	8.12	1.37	2.56
	491	6.42		0.98	-	300	7.76	1.05	(2.71)
	588	-		0.52	3.24	400	6.92	1.05	(2.91)
	781	4.82		0.36	3.39	500	(6.37)	0.96	(3.11)
	981	4.23		0.54	3.41	600	(5.86)	0.50	3.26
	1180	3.54		0.71	-	700	(5.29)	0.41	3.36
						800	4.74	0.37	3.40
						1000	4.16	0.57	(3.41)
70.70	BLACK DOUGLAS; August 5, 1951; 0933, 0946 GCT; 35°33'N, 123°06'W; sounding, 2140 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 22°, 21°.							
	0	-		5.65	0.54	0	15.0	5.65	0.54
	10	15.02	33.19	5.67	0.60	10	15.02	5.67	0.60
						20	15.0	5.68	0.60
	23	-		5.67	0.60	30	15.0	5.69	0.61
	51	-		5.79	0.66	50	14.2	5.79	0.65
	74	-		5.30	1.27	75	11.4	5.28	1.29
	101	10.31		3.76	1.82	100	10.3	3.78	1.80
	149	8.64		3.08	2.16	150	8.60	3.07	(2.17)
	197	7.85		3.08	-	200	7.83	3.07	(2.38)
	295	6.89		1.79	2.76	250	7.31	2.40	(2.59)
	396	6.23		0.87	3.18	300	6.86	1.73	2.78
	494	5.43		0.63	-	400	6.21	0.85	(3.19)
	593	5.01		0.39	-	500	5.40	0.61	(3.29)
	788	4.36		0.44	3.38	600	5.00	0.39	(3.34)
	991	3.80		0.62	3.46	700	4.66	0.40	(3.37)
	1194	3.24		0.84	3.30	800	4.31	0.45	3.45
						1000	3.78	0.64	3.46
70.80	BLACK DOUGLAS; August 5, 1951; 1615 GCT; 35°13'N, 123°48'W; sounding, 2220 fm; wind, 330°, force 3; weather, drizzle; sea, rough; wire angle, 12°.							
	0	-		5.67	0.50	0	15.2	5.67	0.50
	10	15.16	32.92	5.49	0.50	10	15.16	5.49	0.50
	25	-		5.49	0.53	20	15.2	5.47	0.52
	49	-		6.07	0.81	30	15.0	5.51	0.56
	73	-		5.37	1.10	50	11.6	6.06	0.86
	96	9.17		4.99	1.44	75	10.2	5.33	1.12
	148	8.37		3.40	2.06	100	9.1	4.92	1.52
	193	7.90		2.44	2.30	150	8.34	3.33	2.09
	282	6.56		2.14	2.60	200	7.80	2.38	2.33
	379	6.23		1.02	3.05	250	6.96	2.20	2.51
	470	5.63		0.67	-	300	6.46	1.99	2.67
	568	5.20		0.47	3.36	400	6.12	0.92	3.12
	760	4.47		0.41	-	500	5.47	0.57	3.30
	953	3.98		0.51	-	600	5.07	0.43	
	1155	3.41		0.75	-	700	4.70	0.40	
						800	4.34	0.40	
						1000	3.84	0.55	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

73.50 BLACK DOUGLAS; August 3, 1951; 2043 GCT; 35°37'N, 121°16.5'W; sounding, 53 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°.

0	11.85		5.22	-	0	11.85	5.22	
10	11.04	33.42	4.93	1.26	10	11.04	4.93	1.26
25	9.77		3.82	-	20	9.84	3.94	1.46
49	9.63		3.43	1.82	30	9.74	3.68	1.62
74	9.49		3.71u	1.98	50	9.63		1.83
					75	(9.48)		(1.97)

73.60 BLACK DOUGLAS; August 4, 1951; 2000 GCT; 35°18'N, 121°58.5'W; sounding, 1380 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 05°.

0	-		5.82	0.60	0	14.4	5.82	0.60
10	14.28	33.19	5.86	0.60	10	14.28	5.86	0.60
25	-		5.85	-	20	13.9	5.85	0.65
50	-		5.49	1.06	30	13.1	5.86	0.79
74	-		3.83	1.70	50	11.8	5.49	1.06
99	9.40		3.36	1.84	75	9.7	3.80	1.71
152	8.80		2.85	2.12	100	9.4	3.34	1.85
199	8.62		1.95	-	150	8.81	2.86	2.11
293	8.26		1.37	-	200	8.61	1.94	
391	7.50		1.11	2.93	250	8.47	1.52	
485	6.49		0.83	-	300	8.22	1.35	
584	5.93		0.39	-	400	7.41	1.08	
777	4.64		0.58	-	500	6.38	0.78	
969	4.00		0.49	3.42	600	5.85	0.39	
1171	3.46		0.74	-	700	5.17	0.50	
					800	4.53	0.55	
					1000	3.91	0.49	

77.50 BLACK DOUGLAS; August 4, 1951; 0211 GCT; 35°04.5'N, 120°52'W; sounding, 85 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 04°.

0	11.75			1.30	0	11.75		1.30
10	11.93	33.37		1.12	10	11.93		1.12
25	11.83			1.21	20	11.89		1.16
49	10.51			1.50	30	11.71		1.27
74	10.16			1.63	50	10.49		1.50
98	9.60			-	75	10.14		(1.63)
					100	(9.55)		

77.55 BLACK DOUGLAS; August 4, 1951; 0551 GCT; 34°54.5'N, 121°13'W; sounding, 320 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 18°.

0	-		5.95	0.72	0	14.1	5.95	0.72
10	14.14	33.28	5.86	0.78	10	14.14	5.86	0.78
24	-		5.67	0.88	20	14.1	5.72	0.85
48	-		5.22	-	30	13.6	5.57	0.93
71	-		4.05	1.62	50	11.8	5.17	1.29
95	10.01		3.91	1.82	75	10.3	3.98	1.66
146	9.30		-	-	100	9.9	(3.88)	(1.84)
191	8.94		-	-	150	9.26		
238	8.65		-	-	200	8.90		
283	7.97		-	2.68	250	8.51		
335	7.51		-	-	300	7.79		2.74
382	7.40		-	2.98	400	7.26		3.00
434	6.90		-	3.01	500	(6.10)		
479	6.36		-	3.03				

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

77.65 BLACK DOUGLAS; August 4, 1951; 1151 GCT; 34°34'N, 121°55'W; sounding, 2080 fm; wind, 310°, force 4; weather, overcast; sea, rough; wire angle, 10°.

0	-		5.81	0.77	0	13.8	5.81	0.77
10	13.74	33.28	5.88	0.69	10	13.74	5.88	0.69
25	-		5.71	0.96	20	13.7	5.77	0.81
49	-		5.03	1.38	30	12.9	5.61	1.09
74	-		3.96	1.75	50	10.4	4.97	1.39
98	9.24		3.82	1.94	75	10.1	3.95	1.76
150	8.52		3.16	2.15	100	9.2	3.80	1.95
197	8.14		2.75	2.32	150	8.52	3.16	2.15
290	7.77		1.08	-	200	8.13	2.72	(2.33)
387	6.32		1.06	-	250	7.93	1.81	
480	6.00		0.65	-	300	7.70	1.05	
579	5.31		0.53	3.43	400	6.24	0.97	
771	4.64		0.39	-	500	5.92	0.60	
963	4.07		0.52	3.51	600	5.19	0.49	
1167	3.54		0.74	-	700	4.85	0.41	
					800	4.56	0.40	
					1000	3.97	0.56	

80.51 CREST; July 31, 1951; 2225 GCT; 34°27'N, 120°34'W; sounding, 60 fm; wind, 330°, force 6; weather, partly cloudy; sea, moderate; wire angle, 18°.

0	14.74		5.40	0	14.74	5.40
9	14.04	33.44	5.25	10	13.70	5.24
17	12.3		5.16	20	12.07	4.97
28	11.08		4.32	30	11.05	4.24
36	10.74		4.14	50	10.59	4.21
45	10.58		4.11	75	10.55	4.04
54	10.59		4.21			
63	10.59		4.17			
71	10.56		4.09			
81	10.47		3.95			

80.55 CREST; August 1, 1951; 0425 GCT; 34°19.5'N, 120°48'W; sounding, 450 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 35°.

0	-		5.48	0	14.4	5.48
8	14.42	33.47	5.76	10	14.4	5.78
19	-		5.22	20	13.9	5.22
41	-		4.80	30	13.3	5.02
61	-		4.29	50	10.7	4.60
81	9.61		3.79	75	9.7	3.97
123	9.04		2.79	100	9.1	3.34
158	8.83		2.26	150	8.87	2.36
193	8.56		2.06	200	8.51	2.02
231	8.18		1.71	250	7.94	1.56
273	7.65		1.39	300	7.46	1.21
314	7.36		1.12	400	7.07	0.81
399	7.07		0.81	500	6.30	0.55
497	6.32		0.52	600	(5.19)	(0.51)
594	5.24		0.51			

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

80.60 CREST; August 1, 1951; 0833 GCT; 34°09'N, 121°08.5'W; sounding, 1170 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 40°.

0	-		5.78	0.52	0	15.4	5.78	0.52
8	15.39	33.26	5.48	0.49	10	15.4	5.47	0.48
19	-		5.46	0.50	20	15.4	5.45	(0.50)
41	-		5.57	-	30	15.2	5.50	(0.58)
61	-		5.00	-	50	13.6	5.35	(0.90)
83	10.18		4.36	1.52	75	10.5	4.67	(1.40)
122	8.92		3.10	-	100	9.3	3.72	1.73
161	8.63		2.73	2.02	150	8.70	2.82	1.99
237	7.54		2.42	2.25	200	8.14	2.57	2.12
318	6.72		1.49	2.66	250	7.40	2.33	2.33
395	6.31		0.91	2.86	300	6.89	1.74	2.59
474	5.32		0.77	2.98	400	6.29	0.90	2.86
634	4.87		0.37	-	500	5.22	0.74	
811	4.48		0.40	-	600	4.94	0.45	
1000	3.90		0.58	3.18	700	4.73	0.37	
					800	4.51	0.40	
					1000	3.90	0.58	

80.70 CREST; August 1, 1951; 1404 GCT; 33°48'N, 121°50'W; sounding, 1950 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 21°.

0	-		4.91	0.48	0	15.5	4.91	0.48
9	15.56	33.22	4.78	-	10	15.6	4.77	0.47
29	-		5.04	0.50	20	15.6	4.86	0.48
57	-		4.89	0.66	30	15.6	5.04	0.50
83	-		4.67	1.22	50	14.6	4.94	0.59
110	9.22		4.10	1.57	75	11.2	4.74	1.09
161	8.27		2.79	2.00	100	9.4	4.35	1.45
213	7.55		2.43	2.12	150	8.49	3.03	1.94
315	6.47		1.45	2.61	200	7.74	2.58	2.08
415	5.73		0.86	2.89	250	7.14	2.01	2.30
520	5.58		0.63	2.96	300	6.62	1.56	2.55
620	5.18		0.38	3.13	400	5.83	0.92	2.86
832	4.36		0.42	3.16	500	5.60	0.66	2.94
1042	3.71		0.62	3.17	600	5.29	0.41	3.09
1256	3.29		0.89	3.10	700	4.84	0.37	3.15
					800	4.48	0.40	3.16
					1000	3.83	0.57	3.17

80.80 CREST; August 1, 1951; 2026 GCT; 33°28'N, 122°30.5'W; sounding, 2200 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 20°.

0	-		5.27	0.47	0	15.7	5.27	0.47
9	15.66	33.05	5.02	0.44	10	15.7	5.03	0.44
23	-		5.00	0.44	20	15.6	5.00	0.43
52	-		5.33	0.52	30	15.6	5.06	0.45
76	-		5.15	0.68	50	14.5	5.31	0.51
103	9.55		4.39	1.22	75	12.1	5.16	0.68
153	8.76		3.45	1.75	100	9.6	4.48	1.18
200	8.31		2.76	-	150	8.83	3.49	1.73
298	7.24		1.63	2.43	200	8.31	2.76	2.01
401	6.62		0.80	-	250	7.75	2.17	2.24
499	5.97		0.53	2.99	300	7.24	1.62	2.44
598	5.47		0.33	3.02	400	6.63	0.81	2.79
791	4.41		0.38	3.08	500	5.96	0.52	2.99
992	3.76		0.54	3.06	600	5.46	0.33	3.02
1190	-		0.75	3.06	700	4.93	0.33	3.05
					800	4.38	0.37	3.08
					1000	(3.74)	0.55	3.06

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
85.38	CREST; August 3, 1951; 0440 GCT; 34°01.5'N, 119°02.5'W; sounding, 140 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 07°.							
0	-		4.98	-	0	16.1	4.98	
10	14.24	33.27	5.32	-	10	14.24	5.32	
24	11.74		4.98	0.90	20	12.15	5.21	
48	10.95		4.29	1.20	30	11.49	4.78	1.00
72	10.20		3.85	1.43	50	10.85	4.25	1.22
96	9.91		3.08	1.74	75	10.16	3.78	1.46
148	9.24		2.45	2.00	100	9.87	3.00	1.77
197	9.06		2.01	2.22	150	9.22	2.42	2.01
					200	(9.06)	(1.98)	(2.23)
85.40	CREST; August 3, 1951; 0247 GCT; 33°56.5'N, 119°09.5'W; sounding, 410 fm; wind, 320°, force 3; weather, clear; sea, slight; wire angle, 21°.							
0	-		5.12	0.54	0	18.5	5.12	0.54
9	18.12	33.37	5.22	0.50	10	18.1	5.23	0.50
23	-		5.38	0.52	20	17.9	5.35	0.51
46	-		5.50	0.72	30	17.0	5.44	0.57
69	-		4.17	1.46	50	12.4	5.46	0.80
91	10.14		3.67	1.62	75	10.3	4.02	1.53
140	9.56		2.61	2.08	100	9.9	3.49	1.69
182	9.19		2.23	-	150	9.47	2.50	2.12
224	8.84		1.99	2.30	200	9.00	2.09	2.24
269	8.81		1.28	2.56	250	8.80	1.66	2.47
317	8.43		1.09	2.62	300	8.62	1.13	2.60
362	8.00		0.97	2.70	400	7.66	0.85	2.79
455	7.20		0.60	2.91	500	6.85	0.50	2.97
555	6.40		0.40	3.04	600		0.35	
653	-		0.30	-				
85.50	CREST; August 2, 1951; 2140 GCT; 33°37'N, 119°51.5'W; sounding, 170 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 20°.							
0	17.20		5.36	0.52	0	17.20	5.36	0.52
9	16.28	33.42	5.46	0.53	10	16.05	5.45	0.55
23	10.66		4.58	1.21	20	11.50	4.80	0.98
46	9.71		3.45	1.65	30	10.35	4.20	1.42
69	9.26		3.17	1.76	50	9.65	3.37	1.68
91	9.04		2.88	1.86	75	9.18	3.11	1.79
140	8.86		2.43	2.08	100	8.99	2.81	1.90
186	8.70		1.83	2.28	150	8.83	2.32	2.13
231	8.39		1.07	2.52	200	8.61	1.59	2.35
280	8.06		1.03	2.64	250	8.25	1.04	2.57
85.60	CREST; August 2, 1951; 1510 GCT; 33°12.5'N, 120°38.5'W; sounding, 1600 fm; wind, 320°, force 5; weather, overcast; sea, very rough; wire angle, 15°.							
0	-		5.26	0.50	0	16.1	5.26	0.50
10	16.05	33.51	5.22	0.47	10	16.05	5.22	0.47
24	-		5.38	0.47	20	16.1	5.33	0.46
53	-		3.94	1.00	30	15.6	5.38	0.48
76	-		3.24	1.30	50	10.7	4.10	0.94
104	8.97		2.77	1.63	75	9.7	3.25	1.28
155	8.15		2.58	1.97	100	9.0	2.84	1.57
207	7.90		1.70	2.25	150	8.21	2.60	1.94
307	7.26		0.83	2.62	200	7.93	1.82	2.21
414	6.59		0.48	2.73	250	7.65	1.21	2.43
517	5.98		0.37	2.77	300	7.31	0.87	2.60
620	5.60		0.33	2.88	400	6.67	0.50	2.72
821	4.52		0.41	3.02	500	6.09	0.39	2.76
1027	3.86		0.64	-	600	5.66	0.32	2.86
1229	3.24		0.85	-	700	5.19	0.34	2.95
					800	4.62	0.39	3.01
					1000	3.94	0.61	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; August 2, 1951; 0906, 0932 GCT; 32°54.5'N, 121°17'W; sounding, 2200 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 33°, 35°.								85.70
0	-		5.15	0.48	0	15.4	5.15	0.48
8	15.43	33.21	4.56	0.48	10	15.4	4.55	0.49
20	-		4.85	0.54	20	15.4	4.85	0.54
46	-		4.63	1.40	30	15.0	4.80	0.96
67	-		4.29	1.69	50	12.5	4.59	1.48
91	9.45		3.32	1.94	75	9.9	4.00	1.79
					100	9.3	3.13	(1.98)
133	8.98		2.69	-	150	8.78	2.44	
171	8.49		2.11	-	200	8.30	1.75	
249	8.12		1.22	-	250	8.11	1.22	
332	7.52		0.86	-	300	7.79	0.98	
411	7.04		0.66	-	400	7.10	0.69	
492	6.49		0.50	3.06	500	6.44	0.48	3.07
659	5.30		0.33	3.14	600	5.73	0.35	3.12
843	4.62		0.37	3.13	700	5.10	0.33	3.14
					800	4.75	0.35	3.13
CREST; August 2, 1951; 0312 GCT; 32°36'N, 121°56'W; sounding, 2250 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 33°.								85.80
0	-		5.55	0.49	0	15.8	5.55	0.49
8	15.84		5.50	0.50	10	15.8	5.37	0.50
21	-		4.91	0.49	20	15.8	4.92	0.49
46	-		5.92	0.50	30	15.5	5.42	0.49
67	-		5.62	0.76	50	13.5	5.91	0.53
91	10.60		4.91	1.12	75	11.5	5.47	0.87
134	9.13		3.58	1.70	100	10.2	4.59	1.36
176	8.43		3.02	1.92	150	8.84	3.34	1.79
258	7.42		2.29	-	200	8.10	2.78	
346	7.10		1.01	-	250	7.49	2.37	
433	6.32		0.73	-	300	7.24	1.57	
522	5.70		0.47	-	400	6.69	0.83	
702	4.98		0.34	-	500	5.84	0.52	
893	4.24		0.46	3.18	600	5.35	0.39	
1087	-		0.65	3.12	700	4.99	0.35	
					800	4.60	0.40	
					1000	(3.84)	0.57	
CREST; August 3, 1951; 0751 GCT; 33°50'N, 118°37'W; sounding, 320 fm; wind, calm; weather, clear; sea, slight; wire angle, 00°.								87.37
0	-		5.32	0.52	0	17.8	5.32	0.52
10	14.50		5.75	0.57	10	14.50	5.75	0.57
50	-		4.55	1.36	20	12.0	5.70	
75	-		3.48	1.76	30	11.4	5.18	
98	9.88		3.21	1.86	50	10.6	4.55	1.36
151	9.33		2.62	2.14	75	10.0	3.48	1.76
198	9.01		2.08	-	100	9.8	3.18	1.88
244	8.83		1.62	-	150	9.34	2.63	2.13
290	8.71		1.28	2.70u	200	9.02	2.07	
342	8.48		0.99	2.62	250	8.81	1.58	
389	7.75		0.84	2.72	300	8.68	1.22	
436	7.17		0.61	2.83	400	7.58	0.80	2.74
485	6.74		0.54	2.92	500	(6.63)	(0.55)	(2.95)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.28	CREST; August 3, 1951; 1424 GCT; 33°28'N, 117°46.5'W; sounding, 240 fm; wind, 130°, force 2; weather, overcast; sea, slight; wire angle, 12°.							
0	19.11		3.44	-	0	19.11	3.44	
10	16.98	33.32	3.90	0.50	10	16.98	3.90	0.50
25	14.3		3.41	0.53	20	15.1	3.63	0.51
49	12.39a)		3.69	0.92	30	13.8	3.41	0.58
72	10.01		3.94	1.33	50	12.37	3.69	0.97
96	9.92		2.33	1.64	75	10.00	3.94	1.38
146	9.78		1.22u	2.06	100	9.91	2.23	1.70
192	9.78		1.39	2.26	150	9.79		2.07
239	9.37		1.14	2.44	200	9.75	1.36	2.30
287	9.12		0.79	-	250	9.28	1.08	
90.30	CREST; August 3, 1951; 1618 GCT; 33°19.5'N, 117°55'W; sounding, 320 fm; wind, 180°, force 1; weather, overcast; sea, slight; wire angle, 00°.							
0	-		4.65	-	0	18.4	4.65	
10	16.91	33.22	5.02	-	10	16.91	5.02	
25	-		5.17	-	20	15.5	5.16	
51	-		5.23	-	30	15.0	5.22	
75	-		4.94	-	50	13.1	5.23	
99	10.45		4.35	-	75	11.3	4.94	
150	9.36		2.87	-	100	10.4	4.32	
197	8.72		2.61	-	150	9.36	2.87	
244	8.61		2.03	-	200	8.69	2.60	
290	8.80		0.84	2.54	250	8.64	1.89	
341	7.81		1.06	2.60	300	8.74	0.86	2.55
388	7.21		0.80	2.71	400	7.12	0.78	2.73
436	6.88		0.75	2.75	500	(6.60)	(0.55)	
485	6.64		0.58	-				
90.37	CREST; August 4, 1951; 1808, 1828, 1859 GCT; 33°11'N, 118°25.5'W; sounding, 660 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 08°, 08°, 08°.							
0	-		4.73	0.49	0	18.4	4.73	0.49
10	18.39	33.41	4.80	0.46	10	18.39	4.80	0.46
24	-		5.43	0.51	20	17.5	5.42	0.50
49	-		4.72	0.97	30	14.9	5.42	0.56
72	-		4.21	1.25	50	12.0	4.72	0.99
95	9.46		3.53	1.56	75	10.5	4.12	1.28
					100	9.3	3.43	1.61
144	8.86		2.65	1.94	150	8.80	2.58	1.98
189	8.51		2.13	2.14	200	8.44	2.02	2.19
277	7.82		1.40	2.46	250	8.04	1.59	2.37
371	7.09		0.87	-	300	7.64	1.26	2.52
462	6.40		0.48	2.88	400	6.86	0.74	2.77
557	6.11		0.35	2.96	500	6.26	0.40	2.92
649	5.52		0.32	3.03	600	5.85	0.32	3.00
					700	5.30	0.34	3.04
739	5.16		0.33	3.04	800	4.89	0.32	3.05
929	4.35		0.37	3.10	1000	(4.09)		

a) Alternate value, 12.55°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; August 4, 1951; 2322 GCT; 32°54'N, 118°56'W; sounding, 960 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 22°. 90.45

0	-		4.65	0.45	0	17.9	4.65	0.45
9	17.65	33.42	5.21	-	10	17.6	5.22	0.51
23	-		5.25	0.93	20	14.4	5.24	0.72
50	-		3.91	1.55	30	12.6	5.23	1.15
74	-		3.40	1.81	50	10.6	3.91	1.55
101	9.12		2.99	1.96	75	9.5	3.38	1.81
150	8.54		2.55	2.19	100	9.1	3.02	1.96
198	8.23		1.89	-	150	8.54	2.55	2.19
295	7.56		1.00	2.82	200	8.24	1.85	2.47
398	6.58		0.55	3.02	250	7.89	1.37	2.67
497	6.02		0.33	3.17	300	7.52	0.97	2.83
596	5.61		0.30	3.21	400	6.59	0.55	3.02
791	4.93		0.34	3.28	500	6.00	0.32	3.17
993	4.13		0.44	3.33	600	5.59	0.30	3.21
1193	3.86		0.49	-	700	5.21	0.32	3.24
					800	4.90	0.35	3.29
					1000	4.12	0.46	(3.32)

CREST; August 5, 1951; 0402 GCT; 32°38'N, 119°28'W; sounding, 720 fm; wind, 320°, force 6; weather, overcast; sea, moderate; wire angle, 40°. 90.53

0	-		4.77	0.48	0	17.8	4.77	0.48
8	17.85	33.42	5.02	-	10	17.8	5.03	0.51
19	-		5.02	0.51	20	17.8	5.02	0.52
38	-		4.96	0.96	30	14.8	4.99	0.56
59	-		4.23	1.35	50	11.6	4.77	1.21
77	9.64		3.29	1.72	75	9.4	3.40	1.69
116	8.65		2.47	2.05	100	9.0	2.73	1.94
149	8.45		2.25	2.14	150	8.45	2.25	(2.15)
217	7.86		1.41	-	200	8.00	1.66	(2.39)
288	7.54		0.87	2.69	250	7.69	1.12	(2.60)
431	6.58		0.47	2.98	300	7.49	0.82	2.71
589	5.93		0.32	3.01	400	6.80	0.54	2.94
758	4.96		0.34	2.94u	500	6.26	0.39	3.00
948	4.27		0.43	-	600	5.89	0.31	
					700	5.33	0.32	
					800	4.78	0.36	
					1000	(4.12)		

CREST; August 5, 1951; 0824 GCT; 32°25.5'N, 119°55'W; sounding, 620 fm; wind, 300°, force 6; weather, overcast; sea, rough; wire angle, 20°. 90.60

0	-		5.30	0.56	0	16.1	5.30	0.56
9	16.04		5.23	0.54	10	16.1	5.23	0.54
23	-		5.41	0.58	20	16.1	5.39	0.57
47	-		4.87	0.96	30	16.1	5.38	0.66
70	-		3.56	1.64	50	13.6	4.75	1.02
93	8.94		3.40	1.72	75	10.0	3.51	1.66
144	8.74		2.36	2.12	100	8.6	3.33	1.75
188	8.06		2.36	-	150	8.69	2.34	(2.16)
277	7.48		1.43	2.50	200	7.95	2.34	
371	6.19		1.19	-	250	7.62	1.66	
461	6.06		0.48	-	300	7.24	1.36	
559	5.72		0.40	3.00	400	6.10	0.99	
651	5.19		0.34	3.03	500	5.98	0.40	
750	4.61		0.41	3.04	600	5.50	0.38	3.02
947	4.02		0.60	-	700	4.87	0.36	3.04
					800	4.45	0.48	
					1000	(3.91)		

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.70	CREST; August 5, 1951; 1354 GCT; 32°04.5'N, 120°39'W; sounding, missing; wind, 320°, force 6; weather, overcast; sea, rough; wire angle, 25°.							
0	-		3.64	0.50	0	16.0	3.64	0.50
9	15.97		2.79u	0.47	10	16.0	4.05	0.47
22	-		4.18	0.48	20	16.0	4.17	0.48
50	-		3.25	-	30	15.9	4.14	
72	-		2.80	-	50	11.7	3.25	
99	9.08		2.55	2.01	75	9.9	2.79	
148	8.39		2.08	-	100	9.1	2.53	
194	8.05		1.70	-	150	8.38	2.06	
286	6.73		1.47	-	200	8.00	1.67	
384	6.30		0.73	3.10	250	7.19	1.56	
480	5.85		0.48	-	300	6.65	1.40	
575	5.35		0.37	3.14	400	6.23	0.67	
767	4.53		0.42	-	500	5.76	0.44	
964	3.95		0.58	3.17	600	5.24	0.36	
1161	3.38		0.82	-	700	4.79	0.37	
					800	4.41	0.45	
					1000	3.84	0.63	
90.80	CREST; August 5, 1951; 1920 GCT; 31°45'N, 121°18.5'W; sounding, 2230 fm; wind, 340°, force 5; weather, overcast; sea, moderate; wire angle, 42°.							
0	-		4.86	0.45	0	16.2	4.86	0.45
7	16.16	33.15	4.76	0.42	10	16.2	4.76	0.42
19	-		4.93	0.42	20	16.2	4.93	(0.42)
41	-		4.96	-	30	16.0	4.96	(0.44)
60	-		5.20	0.50	50	14.2	5.01	(0.48)
82	12.22		5.27	0.64	75	12.6	5.27	0.58
115	9.88		4.31	1.26	100	10.8	5.02	0.98
141	9.15		3.56	1.58	150	9.01	3.47	1.61
190	8.38		3.28	1.76	200	8.29	3.07	1.88
243	8.11		1.63	2.39	250	8.05	1.59	2.42
292	7.01		1.54	2.50	300	7.02	1.50	2.52
342	7.24		0.80	2.72	400	6.76	0.58	
447	6.34		0.46	-	500	5.99	0.38	
588	5.42		0.34	-	600	(5.35)	(0.35)	
90.90	CREST; August 6, 1951; 0139 GCT; 31°25'N, 121°59'W; sounding, 2180 fm; wind, 360°, force 6; weather, cloudy; sea, rough; wire angle, 23°.							
0	-		4.87	0.48	0	17.4	4.87	0.48
9	17.35	33.25	4.96	-	10	17.4	4.95	0.48
27	-		4.86	0.48	20	17.4	4.91	0.48
55	-		5.22	0.48	30	17.4	4.85	0.48
83	-		5.32	0.58	50	15.0	5.16	0.48
110	10.26		4.94	1.04	75	13.3	5.30	0.54
161	9.47		3.65	1.44	100	11.0	5.21	0.78
214	8.49		3.31	1.76	150	9.6	3.91	1.36
317	6.96		1.95	-	200	8.75	3.40	1.69
418	5.98		0.97	2.80	250	7.92	2.92	(1.98)
524	5.35		0.56	2.96	300	7.17	2.19	(2.33)
627	4.82		0.43	2.99	400	6.14	1.09	(2.75)
841	4.20		0.36	3.03	500	5.49	0.64	2.93
1053	3.74		0.65	3.04	600	4.95	0.45	2.99
					700	4.57	0.38	2.99
					800	4.30	0.35	3.02
					1000	3.84	0.56	3.05

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; August 6, 1951; 0730, 0810 GCT; 31°04.5'N, 122°40'W; sounding, 2200 fm; wind, 330°, force 6; weather, overcast; sea, rough; wire angle, 28°, 25°.								90.100
0	-		4.55	0.45	0	17.1	4.55	0.45
9	17.09	33.18	4.79	0.45	10	17.1	4.80	0.45
22	-		4.80	0.46	20	17.1	4.80	0.46
48	-		5.28	0.48	30	17.1	4.83	0.47
70	-		5.34	0.48	50	14.3	5.30	0.48
95	10.95		4.81	1.02	75	12.2	5.33	0.49
138	9.28		3.58	1.64	100	10.8	4.60	1.14
180	8.59		2.72	1.95	150	9.07	3.31	1.75
263	7.45		1.99	2.30	200	8.28	2.49	2.05
352	6.42		1.38	2.64	250	7.62	2.08	2.25
440	5.82		0.90	2.92	300	7.01	1.75	2.45
530	5.52		0.49	3.09	400	6.05	1.10	2.79
					500	5.61	0.58	3.04
706	4.72		0.35	3.14	600	5.22	0.40	3.12
903	3.94		0.55	3.16	700	4.74	0.35	3.14
1104	3.46		0.71	3.12	800	4.30	0.42	3.16
					1000	3.68	0.65	3.15
CREST; August 8, 1951; 0159 GCT; 32°56'N, 117°17'W; sounding, 100 fm; wind, 310°, force 2; weather, cloudy; sea, slight; wire angle, 00°.								93.27
0	19.35		4.97	0.44	0	19.35	4.97	0.44
10	-	33.35	5.04	0.47	10	16.58	5.04	0.47
20	14.37		5.27	0.50	20	14.37	5.27	0.50
30	13.33		5.35	0.54	30	13.33	5.35	0.54
40	11.88		4.87	0.83	50	10.99	4.64	1.09
50	10.99		4.64	1.09	75	10.20	3.98	1.45
60	10.52		4.27	1.34				
70	10.30		4.13	1.40				
80	10.11		3.52	1.57				
CREST; August 7, 1951; 2250 GCT; 32°49.5'N, 117°30.5'W; sounding, 437 fm; wind, 290°, force 4; weather, partly cloudy; sea, moderate; wire angle, 22°.								93.30
0	-		4.65	0.44	0	19.2	4.65	0.44
9	19.17	33.28	4.62	0.44	10	19.2	4.63	0.44
22	-		5.01	0.44	20	17.0	4.87	0.44
46	-		5.44	0.55	30	16.0	5.24	0.45
69	-		4.63	0.98	50	13.3	5.43	0.62
91	10.30		3.93	1.36	75	11.0	4.45	1.10
139	9.92		2.14	2.04	100	10.2	3.64	1.51
181	9.60		1.78	2.27	150	9.83	2.02	2.10
222	9.60		1.01	2.46	200	9.58	1.52	2.36
264	9.39		1.02	-	250	9.47	1.03	2.53
355	8.30		0.75	2.70	300	9.02	0.93	2.61
442	7.16		0.63	2.81	400	7.69	0.69	2.75
536	6.32		0.40	2.95	500	6.63	0.47	2.90
627	5.77		0.33	3.03	600	5.93	0.34	3.01

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
93.40	CREST; August 7, 1951; 1746, 1816 GCT; 32°31.5'N, 118°09'W; sounding, 1050 fm; wind, 320°, force 5; weather, cloudy; sea, rough; wire angle, 32°, 42°.							
0	-		4.70	0.43	0	17.5	4.70	0.43
9	17.37	33.38	4.91	0.44	10	17.4	4.90	0.45
21	-		4.88	0.46	20	17.0	4.88	0.46
46	-		5.14	0.78	30	15.0	4.90	0.50
67	-		4.43	1.16	50	12.3	5.12	0.87
92	10.22		3.72	1.44	75	11.0	4.18	1.25
135	9.22		2.97	1.82	100	9.9	3.58	1.51
176	8.78		2.45	2.06	150	9.03	2.78	1.91
					200	8.59	2.09	2.19
225	8.36		1.76	2.34	250	8.11	1.53	2.43
312	7.46		1.06	2.67	300	7.57	1.15	2.63
395	6.75		0.71	2.88	400	6.72	0.69	2.89
480	6.25		0.41	3.01	500	6.13	0.36	3.04
653	5.14		0.32	3.16	600	5.48	0.33	3.13
840	4.52		0.40	3.16	700	4.93	0.33	3.16
1036	4.12		0.49	3.16	800	4.63	0.37	3.16
					1000	4.18	0.49	3.16
93.50	CREST; August 7, 1951; 1141 GCT; 32°03'N, 118°50'W; sounding, 620 fm; wind, 320°, force 5; weather, missing; sea, rough; wire angle, 23°.							
0	-		5.16	-	0	17.7	5.16	
9	17.63	33.30	5.14	0.46	10	17.6	5.14	0.46
22	-		5.08	0.48	20	17.6	5.08	0.48
46	-		5.76	0.58	30	16.2	5.11	0.50
69	-		4.87	0.98	50	13.1	5.74	0.63
92	10.20		4.26	1.36	75	10.7	4.72	1.09
142	8.92		3.22	-	100	10.0	4.08	1.45
186	8.26		2.63	2.09	150	8.78	3.12	1.88
275	7.38		1.94	2.41	200	8.10	2.50	2.16
367	6.97		0.85	-	250	7.59	2.13	2.34
456	6.25		0.45	3.04	300	7.25	1.68	2.52
550	5.54		0.33	3.11	400	6.75	0.68	2.92
643	5.24		0.36	3.10	500	5.89	0.37	3.08
737	4.97		0.37	3.09	600	5.35	0.34	3.11
929	4.34		0.48	3.14	700	5.06	0.38	3.09
					800	4.77	0.38	3.09
					1000	(4.07)		
93.60	CREST; August 7, 1951; 0615 GCT; 31°45.5'N, 119°31.5'W; sounding, 1950 fm; wind, 330°, force 5; weather, overcast; sea, rough; wire angle, 50°.							
0	-		4.67	0.46	0	16.4	4.67	0.46
6	16.35	33.17	4.61	0.45	10	16.4	4.62	0.45
16	-		4.97	0.46	20	16.0	5.10	0.46
35	-		5.28	0.46	30	15.7	5.26	0.46
51	-		5.22	0.47	50	15.2	5.24	0.47
68	14.69		5.14	0.50	75	13.6	5.07	0.55
92	11.43		4.84	0.84	100	11.05	4.66	0.98
114	10.40		4.24	-	150	9.24	3.51	1.61
157	9.04		3.41	1.68	200	8.26	2.62	2.00
202	8.25		2.60	2.02	250	7.61	2.11	2.23
246	7.70		2.14	2.22	300	7.00	1.78	
288	7.12		1.87	2.37	400	6.34	1.01	
370	6.46		1.19	-	500	6.02	0.50	
470	6.13		0.59	-	600	5.50	0.31	
608	5.47		0.30	-				

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; August 7, 1951; 0047 GCT; 31°27.5'N, 120°13'W; sounding, 2250 fm; wind, 340°, force 5; weather, overcast; sea, moderate; wire angle, 26°. 93.70

0	-		4.83	0.44	0	17.8	4.83	0.44
9	17.68	33.45	4.87	-	10	17.7	4.87	(0.43)
22	-		4.83	-	20	17.7	4.84	(0.40)
49	-		4.58	0.42	30	17.7	4.77	(0.38)
71	-		4.96	0.40	50	17.6	4.58	0.42
96	14.86		4.84	0.44	75	17.1	4.96	0.41
140	10.64		4.10	1.04	100	14.7	4.80	0.46
184	9.05		3.42	1.72	150	10.20	3.93	1.22
271	8.10		1.81	-	200	8.83	3.17	(1.88)
363	7.14		1.16	2.63	250	8.30	2.19	(2.20)
451	6.52		0.58	2.95	300	7.81	1.57	(2.44)
542	5.86		0.37	3.04	400	6.85	0.88	2.77
724	4.70		0.34	3.10	500	6.17	0.46	3.01
916	4.06		0.49	3.12	600	5.45	0.34	3.07
1115	3.56		0.72	3.09	700	4.84	0.34	3.09
					800	4.41	0.37	3.10
					1000	3.82	0.61	3.09

CREST; August 6, 1951; 1742, 1815 GCT; 31°10'N, 120°54.5'W; sounding, 2200 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 17°, 23°. 93.80

0	-		4.74	0.40	0	17.6	4.74	0.40
9	17.58	33.44	4.80	0.40	10	17.6	4.81	0.40
23	-		4.86	0.40	20	17.6	4.85	0.40
52	-		4.94	0.38	30	17.5	4.87	0.39
76	-		5.21	0.40	50	17.5	4.93	0.38
104	13.88		5.05	0.49	75	16.2	5.21	0.40
156	10.30		4.13	1.18	100	14.1	5.09	0.47
206	8.77		3.46	1.69	150	10.5	4.23	1.03
305	7.32		2.30	2.22	200	8.95	3.53	1.65
410	6.38		1.25	2.70	250	8.06	2.97	1.94
511	5.64		0.69	2.86	300	7.39	2.38	2.20
					400	6.46	1.34	2.67
586	5.33		0.49	3.02	500	5.73	0.75	2.85
784	4.40		0.41	3.08	600	5.26	0.48	3.03
988	3.76		0.60	3.06	700	4.80	0.42	3.07
1191	3.40		0.87	3.01	800	4.34	0.41	3.08
					1000	3.73	0.64	3.06

CREST; August 8, 1951; 0635 GCT; 32°15'N, 117°09'W; sounding, 30 fm; wind, calm; weather, overcast; sea, slight; wire angle, 00°. 97.30

0	16.44		5.19	0.44	0	16.44	5.19	0.44
10	13.26	33.29	5.04	0.64	10	13.26	5.04	0.64
20	12.68		4.67	0.72	20	12.68	4.67	0.72
30	11.78		4.43	1.00	30	11.78	4.43	1.00
40	10.80		3.58	1.42				

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
97.32	CREST; August 8, 1951; 0812 GCT; 32°11.5'N, 117°17'W; sounding, 760 fm; wind, calm; weather, overcast; sea, slight; wire angle, 20°.							
0	-		4.63	0.43	0	18.2	4.63	0.43
8	17.35	33.31	4.93	0.44	10	17.3	5.03	0.44
23	-		5.18	0.46	20	16.1	5.17	0.45
46	-		5.08	0.60	30	14.4	5.17	0.49
70	-		4.05	1.32	50	12.1	5.00	0.68
92	10.32		3.06	1.70	75	10.3	3.87	1.42
140	9.99		2.05	2.04	100	10.2	2.87	1.77
183	9.80		1.67	2.20	150	9.94	1.94	2.08
267	9.35		1.14	2.46	200	9.72	1.56	2.25
357	8.46		0.64	2.73	250	9.44	1.25	2.41
443	6.87		0.64	2.80	300	9.09	0.96	2.57
534	6.30		0.39	2.94	400	7.58	0.62	2.78
715	5.10		0.29	3.05	500	6.50	0.49	2.88
899	4.46		0.43	3.13	600	5.90	0.34	3.00
					700	5.20	0.30	3.04
					800	4.76	0.33	3.08
					1000	(4.23)		
97.40	CREST; August 8, 1951; 1241 GCT; 31°55.5'N, 117°50'W; sounding, 650 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 07°.							
0	-			0.52	0	18.2		0.52
10	18.21	33.19		0.52	10	18.21		0.52
24	-			0.48	20	18.1		0.49
49	-			0.52	30	15.8		0.48
74	-			0.80	50	14.2		0.53
98	10.90			1.18	75	12.6		0.81
151	9.68			1.93	100	10.8		1.20
198	9.12			2.22	150	9.72		1.92
291	7.95			2.59	200	9.11		2.22
388	7.01			-	250	8.49		2.46
481	6.43			3.02	300	7.84		2.62
579	5.70			3.10	400	6.93		2.88
674	5.20			3.13	500	6.31		3.04
776	4.80			-	600	5.57		3.11
973	4.21			3.13	700	5.08		3.14
					800	4.72		3.16
					1000	(4.15)		(3.12)
97.50	CREST; August 8, 1951; 1907 GCT; 31°35.5'N, 118°30.5'W; sounding, 1150 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 10°.							
0	-		4.73	0.46	0	17.9	4.73	0.46
10	17.84	33.28	4.88	-	10	17.84	4.88	0.45
24	-		4.84	0.44	20	17.7	4.87	0.44
54	-		5.31	-	30	16.9	4.88	(0.45)
78	-		4.29	1.11	50	12.9	5.29	(0.58)
106	10.13		3.70	1.44	75	11.5	4.40	(1.02)
157	9.38		2.79	1.88	100	10.4	3.85	1.38
207	9.20		2.03	-	150	9.49	2.94	1.84
306	8.19		1.03	2.59	200	9.21	2.14	(2.12)
411	6.71		0.76	-	250	8.90	1.52	(2.36)
511	6.17		0.48	3.02	300	8.28	1.09	(2.56)
611	5.68		0.36	3.10	400	6.85	0.79	2.82
809	4.62		0.37	3.11	500	6.22	0.51	3.00
1014	4.04		0.57	3.13	600	5.74	0.35	3.10
1215	3.49		0.84	3.12	700	5.21	0.33	3.11
					800	4.67	0.37	3.12
					1000	4.06	0.58	3.12

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; August 9, 1951; 0245 GCT; 31°15.5'N, 119°10.5'W; sounding, 1980 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 35°. 97.60

0	-		4.74	0.45	0	17.3	4.74	0.45
8	17.29	33.40	4.98	0.47	10	17.3	4.99	0.47
20	-		5.04	0.48	20	17.3	5.04	0.48
45	-		5.30	0.50	30	15.9	5.14	0.48
65	-		5.23	0.62	50	14.9	5.30	0.52
88	11.07		4.79	0.98	75	12.1	5.07	0.76
128	9.68		3.71	1.60	100	10.8	4.50	1.19
165	8.98		2.99	1.84	150	9.27	3.22	1.78
239	7.78		2.43	2.10	200	8.40	2.74	1.96
319	7.02		1.77	2.46	250	7.65	2.36	2.15
395	6.41		0.96	-	300	7.19	1.95	2.37
474	5.80		0.67	2.90	400	6.37	0.91	2.72
638	5.30		0.32	3.12	500	5.70	0.59	2.96
822	4.62		0.39	3.14	600	5.41	0.35	3.10
					700	5.09	0.32	3.14
					800	4.70	0.38	3.14
					1000	(4.15)		

CREST; August 9, 1951; 0831 GCT; 30°55'N, 119°50.5'W; sounding, 2050 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 20°. 97.70

0	-		4.76	-	0	17.2	4.76	
8	17.15	33.39	4.88	0.50	10	17.2	4.85	0.50
23	-		4.77	0.48	20	17.1	4.78	0.48
50	-		5.08	0.50	30	17.1	4.80	0.48
74	-		5.23	0.69	50	16.9	5.08	0.50
101	10.58		4.03	1.43	75	13.7	5.23	0.69
150	9.42		2.84	1.92	100	10.6	4.05	1.39
197	8.65		2.71	2.05	150	9.42	2.84	1.92
291	7.35		1.66	2.48	200	8.60	2.71	2.06
391	6.62		0.71	2.92	250	7.90	2.29	2.26
488	5.61		0.52	3.03	300	7.27	1.56	2.52
585	5.14		0.39	3.14	400	6.54	0.69	2.92
779	4.66		0.40	-	500	5.54	0.50	3.05
980	4.00		0.56	3.16	600	5.09	0.40	(3.15)
1182	3.49		0.83	3.11	700	4.82	0.38	(3.19)
					800	4.61	0.40	(3.19)
					1000	3.94	0.58	3.16

CREST; August 9, 1951; 1402 GCT; 30°35.5'N, 120°31'W; sounding, 2150 fm; wind, 330°, force 4; weather, overcast; sea, moderate; wire angle, 12°. 97.80

0	-		5.05	-	0	17.0	5.05	
9	16.93	33.22	5.08	0.46	10	16.9	5.08	0.46
24	-		5.16	0.45	20	16.9	5.15	0.45
53	-		5.09	0.44	30	16.9	5.15	0.45
77	-		5.46	0.42	50	16.7	5.10	0.44
106	13.34		5.35	0.55	75	15.2	5.44	0.42
157	10.54		5.46	1.08	100	13.6	5.35	0.49
209	8.72		1.82	1.76	150	10.86	5.46	0.95
309	7.30		2.17	2.26	200	9.02	2.27	1.69
416	6.16		1.17	-	250	8.00	2.01	1.98
518	5.42		0.67	2.94	300	7.40	2.17	2.22
620	5.04		0.41	3.04	400	6.31	1.30	2.62
821	4.36		0.40	3.10	500	5.59	0.73	2.91
1028	3.79		0.65	3.09	600	5.11	0.45	3.02
1229	3.34		0.90	3.04	700	4.75	0.39	3.08
					800	4.43	0.41	3.10
					1000	3.85	0.61	3.09

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
100.29	CREST; August 10, 1951; 2050 GCT; 31°41'N, 116°43'W; sounding, 76 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.							
0	16.41		4.84	0.52	0	16.41	4.84	0.52
10	13.74	33.21	4.74	0.58	10	13.74	4.74	0.58
24	11.89		4.16	0.94	20	12.07	4.44	0.73
52	11.20		3.64	1.26	30	11.72	4.06	1.05
75	10.82		3.15	1.41	50	11.27	3.68	1.24
112	10.65		3.12	1.56	75	10.82	3.15	1.41
					100	10.70	3.13	1.52
100.30	CREST; August 10, 1951; 1949 GCT; 31°40.5'N, 116°47'W; sounding, 248 fm; wind, 090°, force 1; weather, partly cloudy; sea, slight; wire angle, 15°.							
0	-		5.52	0.50	0	17.0	5.52	0.50
10	-		5.43	0.47	10	15.8	5.43	0.47
24	13.82		5.60	0.56	20	14.6	5.58	0.50
48	11.42		4.32	1.08	30	13.2	5.56	0.78
72	10.61		4.00	1.40	50	11.30	4.33	1.09
95	10.52		2.93	1.74	75	10.59	3.85	1.50
144	10.32		2.50	1.95	100	10.50	2.91	1.76
190	9.96		1.87	2.24	150	10.29	2.37	2.00
236	-		1.50	2.36	200	9.88	1.80	2.26
282	9.34		1.09	2.48	250	9.54	1.38	2.40
335	8.94		0.77	2.66	300	9.23	1.00	2.54
383	8.22		0.52	2.84				
100.40	CREST; August 10, 1951; 1303 GCT; 31°21'N, 117°27'W; sounding, 1050 fm; wind, 320°, force 1; weather, overcast; sea, slight; wire angle, 07°.							
0	-		4.74	0.40	0	18.8	4.74	0.40
10	18.75	33.41	4.96	0.40	10	18.75	4.96	0.40
25	-		5.03	0.40	20	18.7	5.02	0.40
49	-		5.36	0.71	30	18.5	5.04	0.40
73	-		4.46	1.20	50	12.4	5.35	0.68
97	9.99		3.71	1.54	75	10.9	4.38	1.25
149	9.05		2.82	1.92	100	9.8	3.64	1.56
195	8.49		2.34	-	150	9.05	2.81	(1.94)
289	8.04		1.25	-	200	8.44	2.29	
387	7.41		0.48	-	250	8.19	1.67	
480	6.32		0.48	3.02	300	7.99	1.16	
579	5.76		0.33	3.10	400	7.30	0.46	
773	4.83		0.38	3.16	500	6.19	0.45	3.04
966	4.13		0.54	3.16	600	5.65	0.34	3.11
1169	3.56		0.72	3.15	700	5.17	0.38	3.15
					800	4.72	0.43	3.16
					1000	4.03	0.57	3.16
100.50	CREST; August 10, 1951; 0801 GCT; 31°01'N, 118°07'W; sounding, 820 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 16°.							
0	-		4.59	0.44	0	18.6	4.59	0.44
9	18.57		4.59	0.45	10	18.57	4.60	0.46
24	-		4.62	0.48	20	18.6	4.62	0.47
52	-		5.06	0.50	30	18.6	4.68	0.48
76	-		4.92	0.70	50	15.7	5.04	0.50
103	10.84		4.08	1.25	75	12.8	4.93	0.68
153	9.58		2.73	1.81	100	11.0	4.19	1.19
194	8.57		2.70	1.92	150	9.66	2.77	1.78
302	7.38		1.61	2.40	200	8.48	2.69	1.94
406	6.77		0.62	2.81	250	7.85	2.27	2.15
507	6.18		0.42	-	300	7.39	1.64	2.38
606	5.49		0.31	2.64u	400	6.81	0.67	2.78
805	4.56		0.44	3.08	500	6.24	0.45	(2.99)
1009	4.02		0.53	3.10	600	5.52	0.31	
1211	3.52		0.77	3.02	700	5.01	0.36	
					800	4.59	0.43	(3.08)
					1000	4.04	0.54	3.10

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; August 10, 1951; 0254 GCT; 30°41'N, 118°47.5'W; sounding, 1600 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 09°. 100.60

0	-		4.41	0.44	0	19.0	4.41	0.44
10	18.96	33.43	4.70	0.40	10	18.96	4.70	0.40
24	-		4.64	0.40	20	19.0	4.69	0.40
54	-		5.00	0.52	30	19.0	4.64	0.40
78	-		4.31	1.02	50	14.4	5.00	0.48
107	10.10		3.71	1.42	75	11.9	4.41	0.99
158	9.42		2.44	1.92	100	10.2	3.92	1.33
210	9.05		1.94	2.14	150	9.53	2.58	1.87
313	8.06		1.09	-	200	9.11	2.04	2.10
421	6.91		0.70	2.80	250	8.72	1.57	(2.30)
526	5.68		0.38	3.05	300	8.20	1.19	(2.49)
630	5.29		0.33	3.08	400	7.14	0.77	(2.74)
835	4.40		0.44	3.06	500	5.94	0.44	3.00
1044	3.82		0.60	3.02	600	5.38	0.35	3.08
1248	3.32		0.89	-	700	5.01	0.36	3.08
					800	4.59	0.43	3.07
					1000	3.92	0.57	3.03

CREST; August 9, 1951; 2133 GCT; 30°20.5'N, 119°27'W; sounding, 2150 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 15°. 100.70

0	-		4.73	0.41	0	18.8	4.73	0.41
9	18.69	33.48	4.72	0.43	10	18.7	4.74	0.43
24	-		4.89	0.44	20	18.6	4.86	0.44
53	-		3.84	1.27	30	15.9	4.89	0.47
73	-		3.29	1.54	50	11.0	3.95	1.19
105	9.32		2.73	1.80	75	9.8	3.26	1.56
158	9.11		2.01	2.10	100	9.4	2.81	1.77
206	8.17		1.85	2.20	150	9.16	2.06	2.07
305	7.06		1.12	2.60	200	8.35	1.89	2.19
408	6.68		0.44	2.90	250	7.55	1.55	2.38
508	5.94		0.37	3.02	300	7.09	1.16	2.58
607	5.44		0.33	3.06	400	6.71	0.47	2.88
805	4.55		0.43	3.10	500	6.01	0.37	3.02
1008	3.83		0.60	-	600	5.47	0.34	3.06
					700	5.02	0.36	3.08
					800	4.58	0.43	3.08
					1000	3.85	0.60	

CREST; August 11, 1951; 0246 GCT; 30°45'N, 116°21'W; sounding, 40 fm; wind, 270°, force 3; weather, partly cloudy; sea, slight; wire angle, 15°. 105.32

0	19.50		4.26	0.40	0	19.50	4.26	0.40
10	-	33.31	3.77	0.45	10	17.91	3.77	0.45
24	15.67		4.93	0.48	20	16.50	4.85	0.46
38	13.16		4.87	0.60	30	14.35	4.93	0.52
63	11.42		3.54	1.16	50	12.27	4.60	0.81

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
105.35	CREST; August 11, 1951; 0500 GCT; 30°39'N, 116°33'W; sounding, 640 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 24°.							
0	-		4.88	0.42	0	17.8	4.88	0.42
9	16.44	33.26	5.07	-	10	16.4	5.07	0.46
23	-		4.77	0.54	20	15.0	4.83	0.53
45	-		4.41	0.84	30	13.2	4.71	0.63
68	-		3.57	1.17	50	11.9	4.22	0.90
90	10.58		3.01	1.54	75	10.9	3.39	1.34
139	10.02		2.31	-	100	10.5	2.85	1.65
181	10.00		1.82	2.09	150	10.00	2.18	1.96
268	9.49		1.29	2.42	200	9.94	1.69	2.17
359	8.40		0.82	2.69	250	9.63	1.41	2.36
446	7.52		0.56	2.79	300	9.15	1.12	2.53
539	6.15		0.48	2.52u	400	7.98	0.67	2.75
629	5.76		0.32	2.59u	500	6.63	0.51	
724	5.13		0.30	-	600	5.86	0.37	
913	4.29		0.45	2.68	700	5.30	0.29	
					800	4.75	0.33	
					1000	(4.01)		
105.40	CREST; August 11, 1951; 0925 GCT; 30°28.5'N, 116°54'W; sounding, 990 fm; wind, 320°, force 3; weather, overcast; sea, moderate; wire angle, 24°.							
0	-		4.53	0.40	0	18.9	4.53	0.40
9	18.93	33.37	4.57	0.42	10	18.9	4.58	0.41
23	-		4.65	0.44	20	18.8	4.65	0.43
50	-		4.90	0.56	30	17.7	4.71	0.46
73	-		4.42	0.94	50	14.4	4.90	0.56
100	10.44		2.77	1.72	75	12.6	4.36	0.94
148	10.14		2.13	2.06	100	10.44	2.77	1.72
195	9.98		1.42	2.34	150	10.14	2.11	2.08
286	8.66		1.60	2.40	200	9.94	1.45	2.34
382	7.44		0.93	2.72	250	9.20	1.55	2.36
475	6.87		0.49	2.95	300	8.47	1.53	2.45
569	6.13		0.25	3.11	400	7.29	0.83	2.76
757	4.96		0.35	-	500	6.72	0.40	3.01
955	4.24		0.46	3.18	600	5.91	0.25	(3.13)
1154	3.60		0.72	3.12	700	5.29	0.29	(3.18)
					800	4.78	0.38	(3.19)
					1000	4.09	0.50	3.17
105.50	CREST; August 11, 1951; 1410 GCT; 30°08.5'N, 117°34.5'W; sounding, 600 fm; wind, 270°, force 3; weather, overcast; sea, slight; wire angle, 07°.							
0	-		4.32	0.44	0	19.2	4.32	0.44
10	19.17	33.42	4.51	0.42	10	19.17	4.51	0.42
25	-		4.44	0.48	20	19.3	4.47	0.45
49	-		4.97	0.50	30	18.2	4.46	0.48
74	-		4.76	0.89	50	14.9	4.97	0.50
98	11.02		3.65	1.36	75	12.0	4.75	0.90
150	9.68		2.47	1.90	100	11.0	3.64	1.39
197	9.64		1.58	2.30	150	9.68	2.47	1.90
288	8.96		0.79	2.67	200	9.62	1.56	2.31
385	7.80		0.48	2.88	250	9.30	1.08	2.53
479	6.64		0.25	-	300	8.84	0.74	2.71
576	6.02a)		0.26	-	400	7.60	0.36	
671	5.40		0.31	-	500	6.48	0.24	
772	5.10		0.33	3.20	600	5.88	0.27	
869	4.71		0.36	3.22	700	5.29	0.30	
					800	4.99	0.35	

a) Alternate value, 5.81°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

105.60

CREST; August 11, 1951; 1949 GCT; 29°48.5'N, 118°14.5'W; sounding, 1900 fm; wind, 300°, force 3; weather, overcast; sea, slight; wire angle, 08°.

0	-		4.61	-	0	18.3	4.61	
10	18.23	33.39	4.80	0.46	10	18.23	4.80	0.46
25	-		5.18	0.46	20	18.0	5.05	0.46
55	-		5.40	0.69	30	16.1	5.25	0.46
79	-		4.68	1.18	50	13.2	5.40	0.53
108	9.67		4.19	1.44	75	10.8	4.83	1.10
161	8.82		3.11	1.84	100	9.8	4.36	1.37
213	7.97		2.64	2.07	150	8.99	3.22	1.78
314	7.56		1.00	2.67	200	8.15	2.80	2.01
420	6.93		0.50a)	2.94	250	7.76	1.93	2.34
522	6.18		0.49	3.11	300	7.60	1.13	2.62
623	-		0.32	3.15	400	7.08	0.55	2.90
824	4.54		0.40	3.14	500	6.34	0.50	3.09
1031	3.86		0.59	3.18	600	5.72	0.35	3.15
1234	3.37		0.86	-	700	5.17	0.30	3.15
					800	4.65	0.37	3.14
					1000	3.94	0.57	3.18

a) Alternate value, 0.36 ml/L, not used in interpolation.

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

110.33

PAOLINA-T; August 14, 1951; 1121 GCT; 29°50.5'N, 115°52'W; sounding, 47 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 04°.

0	19.03		0	19.03
10	18.72	33.41	10	18.72
25	15.76		20	17.85
50	12.65		30	15.00
75	11.00		50	12.65
			75	11.00

110.35

PAOLINA-T; August 14, 1951; 0836 GCT; 29°45'N, 116°02.5'W; sounding, 770 fm; wind, 360°, force 3; weather, overcast; sea, rough; wire angle, 09°.

10	17.55	33.34	0	18.2
108	10.27		10	17.55
161	9.57		20	16.7
215	9.47		30	15.8
322	8.66		50	13.2
435	7.51		75	11.8
543	6.40		100	10.4
651	5.43		150	9.68
861	4.44		200	9.49
1073	3.65		250	9.25
1278	3.14		300	8.84
			400	7.90
			500	6.80
			600	5.87
			700	5.14
			800	4.69
			1000	3.92

110.40

PAOLINA-T; August 14, 1951; 0440 GCT; 29°36'N, 116°21'W; sounding, 880 fm; wind, 360°, force 3; weather, partly cloudy; sea, moderate; wire angle, 30°.

9	18.83	33.40	0	19.3
86	11.01		10	18.8
129	10.29		20	17.5
167	9.74		30	16.2
243	9.24		50	13.8
324	8.59		75	12.8
402	7.71		100	10.8
486	6.92		150	9.99
568	6.16		200	9.49
658	5.54		250	9.20
847	4.71		300	8.80
			400	7.74
			500	6.80
			600	5.90
			700	5.32
			800	4.90

110.50

PAOLINA-T; August 13, 1951; 2220 GCT; 29°16'N, 116°59'W; sounding, 1850 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 08°.

10	19.56	33.47	0	20.0
97	10.28		10	19.56
151	10.07		20	18.6
200	10.02		30	17.1
297	9.16		50	14.5
400	8.29		75	12.5
497	7.16		100	10.2
599	6.38		150	10.07
803	5.21		200	10.02
1001	4.35		250	9.65
1206	3.62		300	9.12
			400	8.29
			500	7.12
			600	6.37
			700	5.75
			800	5.21
			1000	4.36

110.60

PAOLINA-T; August 13, 1951; 1643 GCT; 28°56.5'N, 117°39'W; sounding, 1950 fm; wind, 340°, force 3; weather, cloudy; sea, moderate; wire angle, 13°.

10	18.58	33.44	0	19.0
96	10.56		10	18.58
149	9.39		20	18.0
196	8.99		30	16.5
290	8.73		50	12.6
388	8.16		75	11.6
484	7.16		100	10.5
583	5.88		150	9.38
780	4.97		200	8.97
975	4.27		250	8.80
1179	3.64		300	8.70
			400	8.05
			500	6.95
			600	5.75
			700	5.30
			800	4.89
			1000	4.20

115.27

PAOLINA-T; August 12, 1951; 0804 GCT; 29°11'N, 114°56'W; sounding, 43 fm; wind, calm; weather, partly cloudy; sea, rough; wire angle, 00°.

0	19.36		0	19.36
10	19.22	33.49	10	19.22
25	13.16		20	18.50
50	11.46		30	12.55
70	10.88		50	11.46
			75	(10.77)

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

PAOLINA-T; August 12, 1951; 1035 GCT; 29°05'N, 115°08'W; sounding, 52 fm; wind, 300°, force 3; weather, partly cloudy; sea, rough; wire angle, 03°.

0	18.58		0	18.58
10	18.56	33.52	10	18.56
25	13.48		20	18.00
49	10.88		30	12.55
73	10.57		50	10.85
			75	(10.56)

PAOLINA-T; August 12, 1951; 1753 GCT; 28°47'N, 115°48'W; sounding, 750 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 04°.

10	19.36	33.46	0	19.4
99	11.94		10	19.36
153	10.89		20	19.4
202	9.97		30	19.0
300	9.28		50	17.1
404	8.05		75	15.0
502	7.14		100	11.9
605	6.19		150	10.93
806	4.79		200	10.00
1002	3.86		250	9.60
1206	3.16		300	9.28
			400	8.10
			500	7.16
			600	6.22
			700	5.47
			800	4.82
			1000	3.86

PAOLINA-T; August 13, 1951; 0720 GCT; 28°05'N, 117°05'W; sounding, 2150 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°.

10	19.89	33.46	0	19.9
107	11.53		10	19.89
160	9.70		20	19.6
213	9.75		30	18.9
319	8.54		50	16.1
431	7.70		75	14.2
538	6.64		100	11.6
645	5.84		150	9.77
858	4.68		200	9.75
1070	4.01		250	9.38
1275	3.43		300	8.75
			400	7.90
			500	7.05
			600	6.15
			700	5.50
			800	4.95
			1000	4.20

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

PAOLINA-T; August 12, 1951; 1410 GCT; 28°56.5'N, 115°27.5'W; sounding, 125 fm; wind, 310°, force 3; weather, overcast; sea, moderate; wire angle, 13°. 115.30 115.35

0	19.49		0	19.49
10	19.50	33.48	10	19.50
97	12.18		20	19.5
149	10.75		30	19.4
199	10.23		50	17.4
			75	15.9
			100	12.1
			150	10.70
			200	(10.21)

PAOLINA-T; August 13, 1951; 0055 GCT; 28°26'N, 116°24.5'W; sounding, 2250 fm; wind, 280°, force 3; weather, cloudy; sea, rough; wire angle, 25°. 115.40 115.50

9	19.76	33.60	0	19.8
95	12.08		10	19.7
140	9.92		20	19.5
183	9.56		30	18.2
274	8.10		50	16.1
369	7.63		75	13.5
460	6.48		100	11.6
552	5.86		150	9.80
735	5.14		200	9.35
927	4.30		250	8.47
1122	3.66		300	7.92
			400	7.32
			500	6.20
			600	5.64
			700	5.25
			800	4.90
			1000	4.03

PAOLINA-T; August 11, 1951; 1305 GCT; 28°21'N, 114°16.5'W; sounding, 32 fm; wind, 350°, force 4; weather, cloudy; sea, moderate; wire angle, 00°. 115.60 120.25

0	20.47		0	20.47
10	20.17	33.60	10	20.17
25	15.17		20	16.25
50	13.06		30	14.55
			50	13.06

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

120.30

PAOLINA-T; August 11, 1951; 0920, 0929 GCT; 28°12'N, 114°36'W; sounding, 48 fm; wind, 360°, force 3; weather, clear; sea,

120.35 moderate; wire angle, 00°, 00°.

0	19.97		0	19.97
10	19.96	33.62	10	19.96
24	15.82		20	18.50
			30	13.15
48	11.25		50	11.20
71	10.65		75	(10.60)

120.45

PAOLINA-T; August 10, 1951; 2226 GCT; 27°44'N, 115°33'W; sounding, 1170 fm; wind, 330°, force 4; weather, overcast; sea, rough;

120.50 wire angle, 04°.

10	20.72	33.57	0	20.7
99	11.47		10	20.72
152	11.34		20	18.5
201	11.43		30	16.6
299	9.64		50	14.8
401	8.36		75	13.0
500	7.51		100	11.4
602	6.10		150	11.35
802	4.70		200	11.43
1000	3.82		250	10.82
1204	3.25		300	9.64
			400	8.37
			500	7.51
			600	6.10
			700	5.35
			800	4.70
			1000	3.82

120.60

PAOLINA-T; August 10, 1951; 1202 GCT; 27°10'N, 116°30'W; sounding, 1950 fm; wind, 340°, force 4; weather, partly cloudy; sea,

120.70 very rough; wire angle, 10°.

10	20.36	33.56	0	21.3
107	10.43		10	20.36
160	10.32		20	17.7
212	9.49		30	16.2
317	8.72		50	13.8
426	7.48		75	11.5
532	6.55		100	10.5
637	5.58		150	10.35
842	4.50		200	9.72
1045	3.88		250	9.12
1249	3.33		300	8.81
			400	7.77
			500	6.81
			600	5.88
			700	5.20
			800	4.70
			1000	4.00

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

PAOLINA-T; August 11, 1951; 0517 GCT; 28°03'N, 114°54'W; sounding, 47 fm; wind, 350°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°.

0	19.20		0	19.20
10	19.18	33.45	10	19.18
25	18.92		20	19.05
48	16.68		30	18.75
72	11.40		50	16.25
			75	(11.25)

PAOLINA-T; August 10, 1951; 1800 GCT; 27°27'N, 115°52'W; sounding, 2280 fm; wind, 300°, force 4; weather, cloudy; sea, moderate; wire angle, 11°.

10	20.54	33.54	0	20.6
97	10.86		10	20.54
148	11.40		20	18.3
195	10.40		30	17.0
288	9.10		50	14.3
387	7.89		75	12.4
481	7.04		100	10.9
580	6.24		150	11.40
776	5.00		200	10.30
971	4.24		250	9.51
1173	3.60		300	8.95
			400	7.75
			500	6.90
			600	6.10
			700	5.45
			800	4.89
			1000	4.15

PAOLINA-T; August 10, 1951; 0540 GCT; 26°52'N, 117°10'W; sounding, 2075 fm; wind, 340°, force 2; weather, partly cloudy; sea, rough; wire angle, 24°.

10	21.04	33.56	0	21.0
90	11.01		10	21.04
135	10.45		20	21.0
174	9.38		30	17.0
254	9.06		50	15.0
340	8.41		75	13.9
424	7.32		100	10.8
516	6.58		150	10.05
700	5.34		200	9.24
888	4.44		250	9.08
1089	3.74		300	8.75
			400	7.59
			500	6.70
			600	6.01
			700	5.34
			800	4.82
			1000	4.01

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

PAOLINA-T; August 9, 1951; 2329 GCT; 26°34'N, 117°49'W; sounding, 2075 fm; wind, 350°, force 1; weather, partly cloudy; sea, rough; wire angle, 11°.

10	20.61	33.56	0	21.0
98	11.60		10	20.61
151	9.92		20	20.5
199	9.30		30	19.5
294	8.98		50	16.9
395	8.06		75	13.5
490	7.14		100	11.5
590	6.26		150	9.94
789	4.93		200	9.30
984	4.26		250	9.12
1187	3.66		300	8.94
			400	8.00
			500	7.05
			600	6.18
			700	5.49
			800	4.87
			1000	4.21

PAOLINA-T; August 2, 1951; 1105 GCT; 27°23'N, 114°42.5'W; sounding, 40 fm; wind, 240°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

0	18.58		0	18.58
10	17.66	34.04	10	17.66
25	17.29		20	17.40
50	14.40		30	17.25
70	13.34		50	14.40
			75	(13.25)

PAOLINA-T; August 2, 1951; 1915 GCT; 27°04'N, 115°30'W; sounding, 2200 fm; wind, 240°, force missing; weather, cloudy; sea, moderate; wire angle, 00°.

10	20.21	33.53	0	20.6
99	11.90		10	20.21
152	9.84		20	18.0
202	9.59		30	17.8
299	8.97		50	16.1
403	7.84		75	14.2
502	7.14		100	11.9
607	6.08		150	9.87
805	4.91		200	9.60
1004	4.19		250	9.33
1210	3.49		300	8.96
			400	7.87
			500	7.15
			600	6.15
			700	5.47
			800	4.94
			1000	4.21

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

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PAOLINA-T; August 9, 1951; 1726 GCT; 26°14'N, 118°32.5'W; sounding, 2200 fm; wind, 140°, force 1; weather, cloudy; sea, rough; wire angle, 03°. 120.80 120.90

10	20.08	33.42	0	20.1
99	13.29		10	20.08
153	10.40		20	19.8
202	10.37		30	18.7
300	9.11		50	17.2
403	7.62		75	15.8
501	6.58		100	13.2
604	6.00		150	10.41
806	4.92		200	10.36
1003	4.11		250	9.80
1208	3.52		300	9.11
			400	7.67
			500	6.59
			600	6.02
			700	5.50
			800	4.95
			1000	4.12

PAOLINA-T; August 2, 1951; 1335, 1354 GCT; 27°16'N, 114°55.5'W; sounding, 360 fm; wind, 320°, force 1; weather, cloudy; sea, slight; wire angle, 00°, 00°. 123.37 123.40

10	16.86	33.57	0	18.0
99	13.30		10	16.86
			20	15.3
155	11.74		30	13.4
203	11.57		50	13.5
253	11.02		75	14.6
302	10.38		100	13.3
356	9.59		150	11.79
405	9.07		200	11.57
504	7.76		250	11.07
607	6.61		300	10.40
			400	9.12
			500	7.82
			600	6.68

PAOLINA-T; August 3, 1951; 0158 GCT; 26°39'N, 116°09'W; sounding, 2200 fm; wind, 320°, force 2; weather, cloudy; sea, rough; wire angle, 00°. 123.50 123.60

10	20.38	33.51		
98	12.47		10	20.38
151	11.28			
199	10.89			
294	9.28			
393	8.17			
489	6.96			
590	6.19		150	11.30
788	5.04		200	10.87
984	4.22		250	10.10
1189	3.61		300	9.20
			400	8.08
			500	6.85
			600	6.13
			700	5.55
			800	4.97
			1000	4.15

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

127.34

PAOLINA-T; August 4, 1951; 0207 GCT; 26°55.5'N, 114°06.5'W; sounding, 45 fm; wind, 290°, force 6; weather, clear; sea, very rough; wire angle, missing.

127.40

10	23.70	34.74	0	23.8
75	17.59		10	23.70
			20	21.5
			30	19.0
			50	17.6
			75	17.59

PAOLINA-T; August 3, 1951; 2101 GCT; 26°44'N, 114°29.5'W; sounding, 1900 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 03°.

10	20.33	33.72	0	20.8
99	10.95		10	20.33
154	10.14		20	19.8
201	9.64		30	17.3
300	8.34		50	12.6
402	7.41		75	12.0
500	6.53		100	10.9
602	5.98		150	10.19
802	4.98		200	9.65
999	4.19		250	9.02
1203	3.46		300	8.34
			400	7.42
			500	6.53
			600	5.99
			700	5.49
			800	4.99
			1000	4.19

127.50

PAOLINA-T; August 3, 1951; 1435 GCT; 26°23.5'N, 115°08'W; sounding, 2100 fm; wind, 330°, force 2; weather, cloudy; sea, slight; wire angle, 09°.

127.60

10	21.17	33.89	0	21.2
99	11.28		10	21.17
151	10.52		20	19.0
198	9.87		30	17.0
292	9.38		50	14.2
391	7.85		75	13.2
486	7.18		100	11.2
586	6.06		150	10.53
781	4.95		200	9.85
974	4.20		250	9.56
1177	3.62		300	9.31
			400	7.76
			500	7.05
			600	5.95
			700	5.36
			800	4.85
			1000	4.10

PAOLINA-T; August 3, 1951; 0812 GCT; 26°04'N, 115°47'W; sounding, 2050 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 11°.

10	20.84	33.61	0	21.1
98	13.80		10	20.84
150	10.50		20	20.5
195	10.47		30	19.2
287	9.96		50	18.3
384	8.61		75	17.3
476	7.48		100	13.8
573	6.35		150	10.50
764	5.16		200	10.45
953	4.45		250	10.20
1154	3.77		300	9.83
			400	8.36
			500	7.20
			600	6.12
			700	5.50
			800	5.00
			1000	4.30

130.30

PAOLINA-T; August 4, 1951; 1952 GCT; 26°29.5'N, 113°29'W; sounding, 36 fm; wind, 150°, force 2; weather, clear; sea, rough; wire angle, 00°.

130.40

0	24.84		0	24.84
10	23.68	34.81	10	23.68
25	20.23		20	21.40
50	18.30		30	19.70
			50	18.30

PAOLINA-T; August 5, 1951; 0312 GCT; 26°16.5'N, 114°09'W; sounding, 1150 fm; wind, 320°, force 6; weather, clear; sea, very rough; wire angle, 08°.

10	21.62	33.77	0	21.8
97	11.20		10	21.62
146	10.40		20	19.0
190	9.63		30	16.4
280	8.54		50	14.2
374	7.69		75	13.0
465	7.01		100	11.1
561	6.56		150	10.33
751	5.32		200	9.48
943	4.62		250	8.86
1145	3.82		300	8.34
			400	7.47
			500	6.82
			600	6.33
			700	5.63
			800	5.12
			1000	4.42

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; August 5, 1951; 1030 GCT; 25°49'N, 114°45.5'W; sounding, 2050 fm; wind, 290°, force 4; weather, clear; sea, very rough; wire angle, 29°.

9	21.06	33.71	0	21.1
84	12.62		10	21.1
126	13.01		20	17.5
163	12.39		30	16.3
235	11.70		50	13.8
312	10.48		75	11.9
387	9.60		100	12.8
466	8.75		150	12.72
631	6.91		200	11.97
803	5.39		250	11.53
998	4.54		300	10.69
			400	9.45
			500	8.37
			600	7.25
			700	6.25
			800	5.41
			1000	(4.52)

PAOLINA-T; August 6, 1951; 1910 GCT; 26°04.5'N, 112°48'W; sounding, 45 fm; wind, 300°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°.

0	26.74		0	26.74
10	26.00	35.03	10	26.00
25	21.54		20	23.60
50	17.87		30	20.50
75	16.37		50	17.87
			75	16.37

PAOLINA-T; August 6, 1951; 0655 GCT; 25°35'N, 113°56'W; sounding, 2050 fm; wind, 300°, force 1; weather, clear; sea, moderate; wire angle, 18°.

9	21.53	34.22	0	23.6
94	13.25		10	21.5
146	12.10		20	17.3
193	11.49		30	15.4
289	9.94		50	13.1
389	8.62		75	13.0
485	7.52		100	13.3
584	6.28		150	12.03
781	5.25		200	11.40
975	4.27		250	10.61
1179	3.66		300	9.76
			400	8.50
			500	7.34
			600	6.17
			700	5.64
			800	5.16
			1000	4.18

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; August 5, 1951; 1642 GCT; 25°28'N, 115°26'W; sounding, 2000 fm; wind, 020°, force 3; weather, partly cloudy; sea, rough; wire angle, 08°. 130.50 130.60

10	21.78	33.89	0	21.8
98	11.24		10	21.78
152	12.58		20	21.7
200	11.20		30	17.8
296	10.30		50	14.6
398	9.14		75	12.5
494	7.62		100	11.1
596	6.72		150	12.57
795	5.30		200	11.20
992	4.30		250	10.65
1196	3.68		300	10.25
			400	9.10
			500	7.57
			600	6.70
			700	5.94
			800	5.27
			1000	4.27

PAOLINA-T; August 6, 1951; 1311 GCT; 25°53'N, 113°28'W; sounding, 300 fm; wind, 300°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°. 133.25 133.30

10	21.39	33.71	0	23.0
99	11.92		10	21.39
124	12.97		20	15.9
154	12.30		30	14.8
			50	12.5
			75	11.5
			100	11.9
			150	12.40

PAOLINA-T; August 6, 1951; 0032 GCT; 25°14.5'N, 114°24'W; sounding, 2200 fm; wind, 330°, force 1; weather, clear; sea, moderate; wire angle, 00°. 133.40 133.50

10	21.56	33.71	0	23.0
100	11.08		10	21.56
154	12.48		20	19.3
202	11.50		30	17.6
299	9.96		50	15.4
403	9.05		75	12.3
499	7.56		100	11.08
602	6.46		150	12.45
804	4.89		200	11.55
997	4.24		250	10.67
1204	3.58		300	9.95
			400	9.07
			500	7.55
			600	6.48
			700	5.65
			800	4.90
			1000	4.24

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

137.23

PAOLINA-T; August 7, 1951; 1413 GCT; 25°35'N, 112°18.5'W; sounding, 44 fm; wind, 230°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

137.30

0	26.53		0	26.53
10	26.38	35.12	10	26.38
25	24.16		20	25.50
50	20.48		30	23.25
			50	20.48

PAOLINA-T; August 7, 1951; 1829 GCT; 25°21'N, 112°46'W; sounding, 145 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°.

9	26.26	35.08		
98	14.54			
151	13.45			
200	12.43			
250	11.53			

137.40

PAOLINA-T; August 8, 1951; 0025 GCT; 25°03'N, 113°23'W; sounding, 1450 fm; wind, 270°, force 1; weather, partly cloudy; sea, very rough; wire angle, 10°.

137.50

10	21.06	33.71	0	24.2
98	12.79		10	21.06
150	12.37		20	20.0
197	11.59		30	18.2
291	10.50		50	16.5
390	8.66		75	14.5
486	7.24		100	12.7
585	6.44		150	12.37
782	5.19		200	11.56
978	4.14		250	10.95
1181	3.74		300	10.36
			400	8.50
			500	7.10
			600	6.35
			700	5.70
			800	5.09
			1000	4.06

PAOLINA-T; August 8, 1951; 0630 GCT; 24°40'N, 114°02'W; sounding, 1850 fm; wind, 250°, force 2; weather, clear; sea, very rough; wire angle, 07°.

10	22.54	33.78	0	25.0
98	12.00		10	22.54
152	12.69		20	20.9
200	12.02		30	19.4
296	10.38		50	16.0
395	8.72		75	14.0
492	8.04		100	11.9
592	6.66		150	12.68
791	5.27		200	12.02
987	4.22		250	11.10
1191	3.65		300	10.30
			400	8.65
			500	7.95
			600	6.60
			700	5.85
			800	5.20
			1000	4.16

59.53
(440)

PAOLINA-T; September 2, 1951; 2209 GCT; 38°05'N, 123°13.5'W; sounding, 60 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 02°.

59.55
(451)

0	13.44		0	13.44
10	13.12	33.33	10	13.12
25	11.45		20	12.00
50	10.31		30	11.18
75	9.64		50	10.31
99	9.31		75	9.64
			100	(9.30)

PAOLINA-T; September 3, 1951; 0125 GCT; 37°56'N, 123°25'W; sounding, 70 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 10°.

0	13.01		0	13.01
10	12.99	33.31	10	12.99
27	11.11		20	12.70
52	9.51		30	10.68
99	8.94		50	9.58
			75	9.16
			100	(8.93)

60.53
(449)

PAOLINA-T; September 3, 1951; 0409 GCT; 37°57'N, 123°04.5'W; sounding, 42 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 02°.

60.55
(459)

0	13.75a)		0	13.75
11	12.85	33.33	10	12.90
27	10.71		20	11.22
54	9.79		30	10.51
			50	9.90

PAOLINA-T; September 3, 1951; 1333 GCT; 37°45'N, 123°15'W; sounding, 430 fm; wind, 280°, force 5; weather, cloudy; sea, rough; wire angle, 05°.

10	13.08	33.31	0	13.1
99	9.35		10	13.08
151	8.98		20	13.1
200	8.55		30	12.9
250	7.76		50	11.6
299	7.20		75	10.1
354	6.88		100	9.3
403	6.42		150	8.99
500	5.69		200	8.55
603	5.31		250	7.76
703	4.72		300	7.19
			400	6.45
			500	5.69
			600	5.32
			700	4.75

a) Alternate value, 13.97°C, not used in interpolation.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 2, 1951; 1132 GCT; 37°33'N, 123°35.5'W; sounding, 1750 fm; wind, 340°, force 6; weather, overcast; sea, very rough; wire angle, 14°.

10	14.52	33.22	0	14.6
115	8.54a)		10	14.52
173	7.84		20	14.5
229	7.61		30	13.8
343	6.50		50	11.4
455	5.84		75	9.7
569	4.91		100	8.9
680	4.57		150	8.06
905	3.89		200	7.70
1128	3.37		250	7.49
1341	2.94		300	6.91
			400	6.14
			500	5.45
			600	4.80
			700	4.50
			800	4.22
			1000	3.64

PAOLINA-T; September 1, 1951; 2140 GCT; 36°55'N, 125°00'W; sounding, 1850 fm; wind, 340°, force 2; weather, overcast; sea, moderate; wire angle, 27°.

7	14.35	33.13	0	14.9
90	8.97b)		10	14.2
133	8.14		20	13.8
176	7.79		30	13.4
265	6.63		50	12.3
359	6.13		75	9.6
450	5.61		100	8.7
545	5.20		150	7.97
736	4.51		200	7.53
936	3.84		250	6.74
1136	3.30		300	6.44
			400	5.90
			500	5.38
			600	5.00
			700	4.65
			800	4.27
			1000	3.64

a) Alternate value, 8.32°C, not used in interpolation.
b) Alternate value, 8.33°C, not used in interpolation.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 2, 1951; 0435 GCT; 37°13.5'N, 124°13'W; sounding, 1950 fm; wind, 280°, force 5; weather, cloudy; sea, rough; wire angle, 23°. 60.60 60.70

9	14.94	33.10	0	14.9
97	8.44		10	14.9
144	7.84		20	14.7
191	7.58		30	12.9
286	6.58		50	9.7
389	5.86		75	8.9
487	5.31		100	8.4
586	4.92		150	7.80
782	4.23		200	7.52
986	3.72		250	6.95
1187	3.24		300	6.46
			400	5.80
			500	5.25
			600	4.88
			700	4.54
			800	4.19
			1000	3.69

PAOLINA-T; September 1, 1951; 1539 GCT; 36°39'N, 125°43.5'W; sounding, 2200 fm; wind, 350°, force 4; weather, cloudy; sea, moderate; wire angle, 05°. 60.80 60.90

10	15.51	33.04	0	15.8
99	8.68		10	15.51
152	7.65		20	15.3
200	7.09		30	15.0
298	6.34		50	14.3
400	5.91		75	10.3
497	5.23		100	8.6
600	4.72		150	7.68
801	4.15		200	7.09
998	3.64		250	6.69
1203	3.14		300	6.33
			400	5.91
			500	5.21
			600	4.72
			700	4.40
			800	4.15
			1000	3.64

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

61.53
(457)

PAOLINA-T; September 3, 1951; 0904 GCT; 37°45'N, 122°54'W; sounding, 28 fm; wind, 330°, force 2; weather, overcast; sea, moderate; wire angle, 01°.

0	13.30		0	13.30
9	13.15	33.32	10	13.14
24	12.28		20	12.60
49	10.18		30	11.99
			50	(10.15)

61.55
(467)

PAOLINA-T; September 3, 1951; 1909 GCT; 37°35'N, 123°05'W; sounding, 560 fm; wind, 310°, force 4; weather, cloudy; sea, very rough; wire angle, 09°.

10	12.50	33.31	0	12.6
98	9.53		10	12.50
151	8.80		20	12.4
199	8.59		30	12.3
296	7.58		50	12.2
398	6.86		75	10.0
500	5.96		100	9.5
602	5.45		150	8.81
701	4.97		200	8.58
1002	3.76		250	8.10
			300	7.55
			400	6.83
			500	5.96
			600	5.45
			700	4.97
			800	4.53
			1000	3.76

61.59
(477)

62.53
(465)

PAOLINA-T; September 5, 1951; 0327 GCT; 37°25'N, 123°15'W; sounding, 750 fm; wind, 300°, force 3; weather, cloudy; sea, slight; wire angle, 10°.

11	14.46	33.30	0	14.6
107	9.09a)		10	14.5
159	8.50		20	14.3
211	8.08		30	13.9
316	6.75		50	12.4
427	6.34		75	10.4
532	5.67		100	9.2
639	5.04		150	8.60
850	4.19		200	8.16
1063	3.48		250	7.60
1269	3.04		300	6.89
			400	6.40
			500	5.89
			600	5.26
			700	4.75
			800	4.37
			1000	3.66

PAOLINA-T; September 3, 1951; 2141 GCT; 37°32.5'N, 122°52'W; sounding, 52 fm; wind, 330°, force 3; weather, overcast; sea, moderate; wire angle, 06°.

0	13.31		0	13.31
10	13.10b)	33.30	10	13.10
25	11.08		20	11.86
50	9.90		30	10.60
74	9.71		50	9.90
			75	(9.70)

a) Alternate value, 8.78°C, not used in interpolation.
b) Alternate value, 13.27°C, not used in interpolation.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 4, 1951; 2336 GCT; 37°23.5'N, 122°56'W; sounding, 195 fm; wind, 280°, force 1; weather, cloudy; sea, slight; wire angle, 05°.

0	14.76		0	14.76
10	14.28	33.31	10	14.28
25	13.57		20	13.78
50	10.01		30	13.24
75	9.74		50	10.01
100	9.43		75	9.74
154	8.94		100	9.43
202	8.55		150	8.97
250	8.38		200	8.56
299	8.01		250	8.38
			300	(8.00)

PAOLINA-T; September 5, 1951; 0921 GCT; 37°15'N, 122°46'W; sounding, 85 fm; wind, 320°, force 1; weather, overcast; sea, slight; wire angle, 03°.

0	14.16		0	14.16
10	14.05		10	14.05
25	12.20		20	13.00
50	10.32		30	11.80
75	9.88		50	10.32
100	9.41		75	9.88
			100	9.41

PAOLINA-T; September 5, 1951; 1430 GCT; 37°05'N, 122°35'W; sounding, 62 fm; wind, 280°, force 1; weather, overcast; sea, slight; wire angle, 03°.

0	13.99		0	13.99
10	13.20	33.31	10	13.20
25	12.51		20	12.70
50	11.19		30	12.27
76	10.03		50	11.19
100	9.04		75	10.05
			100	9.04

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 5, 1951; 0619 GCT; 37°15'N, 123°05'W; sounding, 550 fm; wind, 300°, force 3; weather, cloudy; sea, slight; wire angle, 19°. 62.55 (475) 62.57 (482)

7	14.91		0	14.9
92	8.86		10	14.9
141	8.49		20	14.9
187	8.21		30	13.9
236	7.73		50	9.6
282	7.19		75	9.2
379	6.56		100	8.7
473	5.81		150	8.43
575	5.41		200	8.09
674	4.96		250	7.55
779	4.52		300	7.05
			400	6.39
			500	5.69
			600	5.30
			700	4.84
			800	(4.45)

PAOLINA-T; September 5, 1951; 1621 GCT; 37°06'N, 123°00'W; sounding, 450 fm; wind, 290°, force 2; weather, cloudy; sea, slight; wire angle, 06°. 63.55 (480) 63.57 (505)

10	14.40	33.31	0	14.4
99	8.91		10	14.40
152	8.46		20	14.3
201	8.24		30	14.1
251	7.48		50	12.6
299	6.92		75	9.8
354	6.42		100	8.9
403	5.97		150	8.47
503	5.63		200	8.26
614	5.19		250	7.49
713	4.68		300	6.92
			400	5.97
			500	5.64
			600	5.26
			700	4.75

PAOLINA-T; September 5, 1951; 1912 GCT; 36°55'N, 122°49'W; sounding, 1050 fm; wind, 290°, force 2; weather, overcast; sea, moderate; wire angle, 00°. 64.54 (503) 64.57 (513)

10	14.26	33.30	0	14.9
99	9.14		10	14.26
152	8.50		20	13.2
201	8.21		30	12.3
299	7.48		50	10.9
402	6.54		75	9.8
500	5.75		100	9.1
604	5.20		150	8.53
805	4.50		200	8.22
1004	3.78		250	7.88
1209	3.15		300	7.46
			400	6.57
			500	5.75
			600	5.23
			700	4.84
			800	4.52
			1000	3.80

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

6457 (513)

PAOLINA-T; September 5, 1951; 2026 GCT;[a] 36°55'N, 122°49'W; sounding, 1050 fm; wind, 290°, force 2; weather, overcast; sea, moderate; wire angle, 02°.

6653 (511)

0	15.07			
10	14.56			
20	12.34			
30	11.48			
40	11.14			
50	10.80			
70	10.22			
92	9.64			
110	8.93			
124	8.73			
133	8.71			

PAOLINA-T; September 5, 1951; 2352 GCT; 36°57'N, 122°24'W; sounding, 195 fm; wind, 300°, force 3; weather, cloudy; sea, slight; wire angle, 13°.

0	15.03		0	15.03
10	14.91	33.30	10	14.91
24	14.57		20	14.69
48	11.07		30	14.16
72	9.72		50	10.91
96	9.08		75	9.62
147	8.77		100	9.03
192	8.40		150	8.73
239	7.96		200	8.31
288	7.74		250	7.90

6656 (521)

PAOLINA-T; September 6, 1951; 1243 GCT; 36°45'N, 122°35'W; sounding, 1225 fm; wind, 340°, force 5; weather, overcast; sea, rough; wire angle, 13°.

6750 (509)

10	15.69	33.24	0	15.7
107	8.97		10	15.69
161	8.21		20	15.7
215	7.62		30	15.7
390	6.15		50	12.0
685	4.88		75	9.9
1279	3.04		100	9.1
			150	8.33
			200	7.78

PAOLINA-T; September 6, 1951; 0218 GCT; 36°55'N, 122°05'W; sounding, 32 fm; wind, 280°, force 5; weather, clear; sea, rough; wire angle, 07°.

0	13.65		0	13.65
10	12.58	33.39	10	12.58
25	11.15		20	11.48
50	10.26		30	10.92
			50	10.26

6753 (519)

PAOLINA-T; September 6, 1951; 0915 GCT; 36°44'N, 122°15'W; sounding, 400 fm; wind, 300°, force 5; weather, clear; sea, moderate; wire angle, 11°.

6756 (529)

9	15.16	33.28	0	15.2
96	9.59		10	15.2
150	8.86		20	15.1
198	8.56		30	14.5
247	8.17		50	11.4
295	7.92		75	10.1
351	6.75		100	9.5
399	6.32		150	8.86
498	5.83		200	8.54
601	5.43		250	8.15
702	4.92		300	7.89
			400	6.32
			500	5.80
			600	5.43
			700	4.94

PAOLINA-T; September 6, 1951; 1552 GCT; 36°35'N, 122°26'W; sounding, 1400 fm; wind, 320°, force 5; weather, overcast; sea, rough; wire angle, 07°.

10	14.92	33.24	0	14.9
108	8.90		10	14.92
161	8.18		20	14.9
215	7.72		30	14.4
322	6.61		50	12.5
435	5.80		75	10.0
543	5.43		100	9.1
651	4.99		150	8.32
865	4.22		200	7.85
1285	3.00		250	7.35
			300	6.81
			400	6.00
			500	5.55
			600	5.23
			700	4.80
			800	4.44
			1000	3.80

a) Bathythermograph calibration cast.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 6, 1951; 0558 GCT; 36°44.5'N, 121°56.5'W; sounding, 50 fm; wind, 300°, force 4; weather, clear; sea, moderate; wire angle, 03°.

0	13.86		0	13.86
10	13.81	33.31	10	13.81
25	11.58		20	12.60
75	9.54		30	11.46
			50	10.50
			75	9.54

PAOLINA-T; September 6, 1951; 2318 GCT; 36°25'N, 122°15'W; sounding, 750 fm; wind, 290°, force 4; weather, overcast; sea, very rough; wire angle, 20°.

9	14.50	33.31	0	14.5
93	9.23		10	14.5
145	8.36		20	14.5
191	7.96		30	14.4
283	7.08		50	11.4
379	6.33		75	9.9
472	5.74		100	9.1
571	5.17		150	8.31
764	4.57		200	7.87
956	3.94		250	7.35
1161	3.45		300	6.94
			400	6.19
			500	5.57
			600	5.04
			700	4.74
			800	4.47
			1000	3.82

PAOLINA-T; September 7, 1951; 0941 GCT; 36°04.5'N, 121°55'W; sounding, 595 fm; wind, 300°, force 6; weather, clear; sea, very rough; wire angle, 48°.

8	13.89		0	13.9
66	10.36		10	13.9
97	9.00		20	13.7
125	8.88		30	12.8
184	8.28		50	12.2
253	7.44		75	9.6
320	7.33		100	8.98
396	6.69		150	8.68
475	6.10		200	8.07
567	5.24		250	7.46
			300	7.35
			400	6.65
			500	5.88
			600	(5.10)

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 6, 1951; 1929 GCT; 36°35'N, 122°05'W; sounding, 600 fm; wind, 320°, force 4; weather, overcast; sea, rough; wire angle, 05°.

68.50
(517)

68.54
(527)

10	12.82	33.44	0	12.8
99	9.34		10	12.82
153	8.96		20	12.4
203	8.24		30	11.9
301	7.44		50	10.9
404	6.70		75	9.9
502	5.85		100	9.3
606	5.30		150	8.98
707	4.92		200	8.30
811	4.52		250	7.84
1011	3.73		300	7.45
			400	6.74
			500	5.87
			600	5.33
			700	4.95
			800	4.56
			1000	3.78

PAOLINA-T; September 7, 1951; 2036 GCT; 36°14.5'N, 122°05.5'W; sounding, 300 fm; wind, 300°, force 5; weather, partly cloudy; sea, rough; wire angle, 30°.

68.56
(534)

69.55
(540)

8	11.90	33.34	0	12.1
67	9.68		10	11.8
89	9.51		20	11.5
141	8.94		30	11.5
186	8.72		50	10.0
234	8.00		75	9.6
281	7.47		100	9.39
338	7.10		150	8.87
391	6.74		200	8.61
507	5.92		250	7.80
			300	7.33
			400	6.65
			500	5.96

PAOLINA-T; August 31, 1951; 0517 GCT; 35°53'N, 122°23'W; sounding, 1950 fm; wind, 280°, force 3; weather, partly cloudy; sea, slight; wire angle, 20°.

70.54
(549)

70.60

14	15.77	33.22	0	15.9
119	9.22		10	15.8
135	9.02		20	15.7
181	8.51		30	15.4
271	8.01		50	13.7
368	7.36		75	11.5
458	6.69		100	9.7
555	5.94		150	8.85
745	4.80		200	8.37
937	4.17		250	8.10
1139	3.52		300	7.84
			400	7.11
			500	6.38
			600	5.63
			700	5.04
			800	4.59
			1000	3.96

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

70.70

PAOLINA-T; August 31, 1951; 1200 GCT; 35°28.5'N, 123°10'W; sounding, 2100 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 12°.

70.80

10	15.81	33.21	0	16.4
107	8.77		10	15.81
161	8.04		20	15.8
214	7.56		30	15.7
321	6.50		50	12.0
432	5.76		75	10.1
540	5.34		100	8.9
648	4.67		150	8.18
859	4.20		200	7.67
1071	3.62		250	7.23
1276	3.13		300	6.71
			400	5.95
			500	5.49
			600	4.90
			700	4.51
			800	4.30
			1000	3.86

70.90

PAOLINA-T; August 31, 1951; 2300 GCT; 34°53'N, 124°30'W; sounding, 2250 fm; wind, 360°, force 1; weather, cloudy; sea, moderate; wire angle, 00°.

71.54
(555)

9	16.28	33.03	0	16.6
85	9.60		10	16.2
110	8.93		20	16.1
213	7.81		30	16.0
311	6.72		50	14.6
414	5.77		75	10.1
513	5.31		100	9.9
616	4.97		150	8.47
817	4.27		200	7.93
1013	3.72		250	7.41
1216	3.26		300	6.85
			400	5.85
			500	5.36
			600	5.01
			700	4.69
			800	4.32
			1000	3.76

72.52
(562)

PAOLINA-T; September 7, 1951; 1755 GCT; 35°45'N, 121°35'W; sounding, 400 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 25°.

73.52
(603)

9	13.43	33.26	0	13.5
89	8.88		10	13.4
138	8.40		20	13.3
182	8.02		30	13.2
227	7.53		50	10.0
272	7.36		75	9.1
322	7.11		100	8.7
368	6.74		150	8.30
465	6.20		200	7.81
566	5.56		250	7.43
668	4.86		300	7.23
			400	6.55
			500	6.00
			600	5.33

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

PAOLINA-T; August 31, 1951; 1756 GCT; 35°07'N, 123°53'W; sounding, 2200 fm; wind, 350°, force 2; weather, cloudy; sea, moderate; wire angle, 10°.

10	16.23	33.06	0	16.2
97	9.24		10	16.23
150	8.34		20	15.7
197	7.80		30	15.6
292	6.92		50	15.5
394	6.11		75	11.1
489	5.54		100	9.2
590	5.08		150	8.34
790	4.42		200	7.77
985	3.83		250	7.29
1188	3.34		300	6.86
			400	6.06
			500	5.49
			600	5.02
			700	4.68
			800	4.40
			1000	3.78

PAOLINA-T; September 7, 1951; 1339 GCT; 36°54'N, 121°46.5'W; sounding, 540 fm; wind, 310°, force 5; weather, clear; sea, very rough; wire angle, 40°.

8	13.25	33.24	0	13.4
72	9.46		10	13.2
108	8.57		20	12.7
140	8.25		30	12.2
208	7.70		50	11.8
279	7.18		75	9.4
352	6.81		100	8.71
429	6.11		150	8.15
509	5.70		200	7.76
591	5.20		250	7.38
771	4.52		300	7.07
			400	6.36
			500	5.75
			600	5.16
			700	4.75

PAOLINA-T; September 7, 1951; 2128, 2151 GCT; 35°35'N, 121°25'W; sounding, 280 fm; wind, 300°, force 4; weather, partly cloudy; sea, rough; wire angle, 17°, 23°.

9	12.76	33.33	0	12.9
73	9.86		10	12.8
97	9.44		20	12.6
151	8.85		30	11.9
199	8.48		50	10.8
253	8.18		75	9.8
297a)	7.88		100	9.49
			150	8.86
342	7.50		200	8.47
381	7.11		250	8.19
446	6.60		300	7.85
491	6.40		400	6.95
			500	(6.38)

a) Separation of casts not indicated on original data sheet; bottom depth of first cast assumed to be 297 meters.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; August 30, 1951; 2239 GCT; 35°18'N, 121°58.5'W; sounding, 1270 fm; wind, 220°, force 1; weather, partly cloudy; sea, moderate; wire angle, 07°.

10	15.53	33.21	0	16.5
99	9.60		10	15.53
153	8.87		20	15.3
201	8.40		30	15.1
297	6.77		50	13.6
398	6.13		75	10.7
495	5.70		100	9.6
598	5.28		150	8.90
798	4.48		200	8.41
994	3.98		250	7.45
1197	3.35		300	6.73
			400	6.11
			500	5.69
			600	5.26
			700	4.86
			800	4.45
			1000	3.97

PAOLINA-T; September 8, 1951; 0357 GCT; 35°15'N, 121°05'W; sounding, 420 fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 20°.

0	14.42		0	14.42
9	14.38	33.33	10	14.37
24	14.26		20	14.29
47	12.28		30	14.12
70	10.79		50	12.08
93	9.60		75	10.50
145	8.88		100	9.42
190	8.62		150	8.85
235	8.38		200	8.57
283	7.94		250	8.25
335	7.55		300	7.80

PAOLINA-T; August 30, 1951; 1015 GCT; 34°54.5'N, 121°18.5'W; sounding, 240 fm; wind, 080°, force 1; weather, partly cloudy; sea, smooth; wire angle, 01°.

10	15.08	33.31	0	15.7
25	14.72		10	15.08
50	12.38		20	14.81
75	10.42		30	14.66
100	9.90		50	12.38
155	9.26		75	10.42
204	8.78		100	9.90
254	8.20		150	9.32
304	7.91		200	8.81
359	7.77		250	8.23
409	7.07		300	7.93
			400	7.25

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

PAOLINA-T; September 8, 1951; 0046 GCT; 35°25'N, 121°15'W; sounding, 215 fm; wind, 320°, force 7; weather, cloudy; sea, very rough; wire angle, 38°. 73.60

0	14.27		0	14.27
8	14.28	33.33	10	14.27
20	14.24		20	14.24
39	13.07		30	14.11
57	10.16		50	11.30
78	9.46		75	9.51
122	9.10		100	9.27
163	8.67		150	8.80
206	8.30		200	8.35
251	8.08		250	8.08
305	7.66		300	7.70

74.53 (609)

PAOLINA-T; August 30, 1951; 0621 GCT; 35°04.5'N, 120°52'W; sounding, 86 fm; wind, 100°, force 1; weather, overcast; sea, calm; wire angle, 00°. 76.52 (616) 77.50

0	15.75		0	15.75
9	15.10	33.30	10	15.07
25	14.27		20	14.50
50	11.48		30	13.92
75	10.25		50	11.48
100	9.73		75	10.25
125	9.40		100	9.73
137	9.12		150	8.91
155	8.85			

PAOLINA-T; August 30, 1951; 1621 GCT; 34°38.5'N, 122°01'W; sounding, 2030 fm; wind, 090°, force 1; weather, cloudy; sea, moderate; wire angle, 02°. 77.55 77.65

10	15.20	33.24	0	17.1
100	9.26		10	15.20
154	8.88		20	15.0
203	8.56		30	14.3
299	7.74		50	10.8
402	7.02		75	10.2
500	5.60		100	9.26
604	5.24		150	8.91
805	4.65		200	8.57
1002	3.89		250	8.24
1207	3.31		300	7.73
			400	7.04
			500	5.60
			600	5.25
			700	4.96
			800	4.67
			1000	3.90

	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
80.51	BLACK DOUGLAS; September 13, 1951; 0524 GCT; 34°26.5'N, 120°32.5'W; sounding, 50 fm; wind, 300°, force 1; weather, overcast; sea, moderate; wire angle, 00°.								
	0	17.17		5.79	0.50	0	17.17	5.79	0.50
	10	17.12	33.42	5.83	-	10	17.12	5.83	0.52
	25	15.87		5.86	0.55	20	16.58	5.86	0.54
	50	11.79		5.17	1.11	30	14.60	5.84	0.59
	75	9.91		3.67	1.72	50	11.79	5.17	1.11
						75	9.91	3.67	1.72
80.55	BLACK DOUGLAS; September 13, 1951; 0249 GCT; 34°19'N, 120°48'W; sounding, 430 fm; wind, 220°, force 1; weather, overcast; sea, moderate; wire angle, 00°.								
	0	-		5.91	0.50	0	15.9	5.91	0.50
	10	15.76	33.38	5.90	0.50	10	15.76	5.90	0.50
	25	-		5.80	0.53	20	15.6	5.85	0.52
	50	-		5.18	1.10	30	15.5	5.73	0.56
	74	-		4.29	1.50	50	12.1	5.18	1.10
	98	9.78		3.68	1.79	75	10.6	4.28	1.50
	150	9.00		2.97	2.04	100	9.7	3.60	1.80
	196	8.17		2.81	2.23	150	9.00	2.97	2.04
	243	7.61		2.33	-	200	8.10	2.78	2.24
	289	7.07		1.98	2.54	250	7.52	2.27	2.41
	340	6.80		1.58	2.66	300	7.00	1.89	2.56
	388	6.60		1.11	2.88	400	6.52	1.04	2.90
	482	5.93		0.81	3.04	500	5.81	0.78	3.06
	584	5.39		0.55	3.18	600	5.30	0.51	3.21
	682	4.87		0.37	3.34	700	(4.79)		
80.60	BLACK DOUGLAS; September 12, 1951; 2334 GCT; 34°09'N, 121°09'W; sounding, 1220 fm; wind, 220°, force 1; weather, overcast; sea, rough; wire angle, 12°.								
	0	-		5.64	0.59	0	15.9	5.64	0.59
	10	15.74	33.35	5.73	-	10	15.74	5.73	0.57
	24	-		5.64	0.56	20	15.6	5.70	0.56
	48	-		5.25	1.20	30	14.5	5.58	0.59
	73	-		4.46	-	50	11.3	5.20	1.26
	96	9.33		4.08	1.72	75	9.8	4.40	1.62
	147	8.77		2.82	-	100	9.3	4.00	(1.74)
	191	7.98		2.67	-	150	8.70	2.80	(2.14)
	280	6.88		2.02	2.52	200	7.86	2.63	(2.25)
	375	6.52		1.00	2.98	250	7.18	2.28	(2.40)
	465	5.95		0.68	3.12	300	6.79	1.81	2.63
	558	5.30		0.52	3.11	400	6.40	0.89	3.03
	742	4.55		0.37	3.24	500	5.70	0.60	3.11
	925	4.13		0.52	3.24	600	5.09	0.48	3.15
	1124	3.57		0.71	3.24	700	4.70	0.39	3.22
						800	4.39	0.40	3.24
						1000	3.94	0.62	3.24
80.70	BLACK DOUGLAS; September 12, 1951; 1739 GCT; 33°49'N, 121°51'W; sounding, 2000 fm; wind, 160°, force 1; weather, overcast; sea, rough; wire angle, 05°.								
	0	-		5.76	0.60	0		5.76	0.60
	10	15.49		5.56	0.58	10	15.49	5.56	0.58
	25	-		5.71	0.53	20		5.70	0.54
	50	-	33.29	5.18	1.08	30		5.70	0.54
	74	-		4.32	1.46	50		5.18	1.08
	98	9.60		3.83	1.68	75		4.30	1.47
	149	8.55		2.99	2.02	100	9.56	3.80	1.70
	195	7.95		2.91	-	150	8.51	2.98	(2.02)
	288	6.94		1.81	-	200	7.89	2.88	(2.02)
	385	6.28		0.94	2.84	250	7.32	2.30	(2.22)
	477	5.61		0.65	3.03	300	6.83	1.67	(2.51)
	575	5.34		0.41	-	400	6.18	0.89	2.87
	765	4.47		0.46	-	500	5.50	0.59	
	956	3.94		0.58	3.19	600	5.25	0.41	
	1157	3.45		-	-	700	4.82	0.42	
						800	4.34	0.48	
						1000	3.84	(0.60)	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

BLACK DOUGLAS; September 12, 1951; 1107, 1134 GCT; 33°29'N, 122°32'W; sounding, 2180 fm; wind, 270°, force 1; weather, overcast; sea, rough; wire angle, 05°, 04°. 80.80

0	-		5.57	0.54	0	16.7	5.57	0.54
10	16.73	33.02	5.51	0.54	10	16.73	5.51	0.54
25	-		5.58	0.54	20	16.7	5.55	0.54
50	-		5.93	0.58	30	16.9	5.67	0.54
74	-		6.01	0.74	50	16.1	5.93	0.58
98	10.56		5.28	1.20	75	12.5	6.01	0.74
149	8.90		3.63	1.86	100	10.5	5.19	1.23
194	8.24		3.04	2.06	150	8.89	3.63	1.87
284	7.57		1.97	2.44	200	8.18	2.99	2.08
					250	7.75	2.36	2.30
284a)	7.47		-	-	300	7.40	1.79	2.50
381	6.73		1.00	2.80	400	6.54	0.93	2.83
473	5.66		0.80	2.96	500	5.52	0.71	3.00
569	5.25		0.51	3.08	600	5.15	0.49	3.10
761	4.73		0.41	3.16	700	4.89	0.42	3.13
952	3.97		0.57	-	800	4.59	0.42	3.19
1153	3.53		0.74	3.23	1000	3.82	0.61	3.25

BLACK DOUGLAS; September 12, 1951; 0426 GCT; 33°09'N, 123°13'W; sounding, 2340 fm; wind, 330°, force 3; weather, overcast; sea, very rough; wire angle, 09°. 80.90

0	-		5.52	0.54	0	17.0	5.52	0.54
10	17.02	33.22	5.54	0.56	10	17.02	5.54	0.56
25	-		5.50	0.52	20	17.0	5.53	0.53
50	-		5.91	0.58	30	17.0	5.52	0.53
74	-		6.07	-	50	15.1	5.91	0.58
98	10.56		5.29	1.20	75	12.4	6.06	0.78
					100	(10.5)	(5.20)	(1.24)

BLACK DOUGLAS; September 11, 1951; 2124 GCT; 32°49'N, 123°54'W; sounding, 2440 fm; wind, 330°, force 5; weather, cloudy; sea, high; wire angle, 09°. 80.100

0	-		5.51	0.58	0	17.2	5.51	0.58
10	17.16	33.19	5.51	0.58	10	17.16	5.51	0.58
25	-		5.54	0.53	20	17.1	5.53	0.54
50	-		5.92	0.57	30	17.1	5.61	0.53
74	-		6.01	0.74	50	15.0	5.92	0.57
98	10.78		5.38	1.04	75	12.3	6.01	0.74
151	9.11		4.02	1.76	100	10.7	5.30	1.07
197	8.20		3.39	1.96	150	9.15	4.04	1.75
288	7.03		2.12	2.50	200	8.15	3.31	1.98
385	6.11		1.30	2.89	250	7.49	2.55	2.30
476	5.44		0.77	3.12	300	6.90	2.00	2.55
573	5.07		0.44	3.18	400	6.00	1.20	2.94
762	4.57		0.51	-	500	5.34	0.67	3.13
952	3.97		0.60	-	600	4.99	0.44	
1151	3.49				700	4.72	0.48	
					800	4.45	0.55	
					1000	3.84	(0.60)	

a) Overlapping casts; reconciliation of temperature curve when necessary.

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OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

83.55

PAOLINA-T; September 8, 1951; 1616 GCT; 33°44'N, 120°25'W; sounding, 600 fm; wind, 280°, force 1; weather, fog; sea, rough; wire angle, 07°.

85.38

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C
9	13.57		0	15.2
99	9.20		10	13.5
154	8.99		20	13.0
202	8.61		30	12.6
299	8.23		50	10.3
403	7.42		75	9.5
502	6.15		100	9.2
605	5.41		150	9.02
711	4.91		200	8.63
813	4.36		250	8.37
1012	3.93		300	8.23
			400	7.45
			500	6.18
			600	5.45
			700	4.96
			800	4.42
			1000	3.95

PAOLINA-T; September 9, 1951; 0410 GCT; 34°00.5'N, 119°03'W; sounding, 45 fm; wind, calm; weather, fog; sea, calm; wire angle, 05°.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C
0	18.29		0	18.29
10	18.20	33.37	10	18.20
50	11.05		20	17.4
			30	15.3
			50	11.05

85.40

PAOLINA-T; September 9, 1951; 0236 GCT; 33°57.5'N, 119°11'W; sounding, 320 fm; wind, calm; weather, overcast; sea, slight; wire angle, 02°.

85.50

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C
10	18.08	33.37	0	18.7
75	10.03		10	18.08
100	9.84		20	17.3
154	9.23		30	16.0
203	9.13		50	11.7
252	8.96		75	10.03
303	8.60		100	9.84
357	8.25		150	9.26
407	7.37		200	9.13
462	6.88		250	8.97
507	6.41		300	8.63
			400	7.45
			500	6.47

PAOLINA-T; September 8, 1951; 2009 GCT; 33°39.5'N, 119°50'W; sounding, 85 fm; wind, 280°, force 1; weather, overcast; sea, slight; wire angle, 00°.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C
0	16.68		0	16.68
24	13.34		10	16.6
50	10.18		20	13.9
75	9.47		30	12.57
99	9.31		50	10.18
			75	9.47
			100	(9.30)

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

BLACK DOUGLAS; September 9, 1951; 1452 GCT; 33°28.5'N, 117°46.5'W; sounding, 215 fm; wind, calm; weather, clear; sea, slight; wire angle, 04°. 90.28

0	18.72		5.15	0.54	0	18.72	5.15	0.54
10	16.63	33.35	5.61	0.54	10	16.63	5.61	0.54
25	14.37		5.76	0.64	20	15.10	5.74	0.57
50	11.75		5.04	1.08	30	13.40	5.74	0.72
74	11.03		4.01	1.44	50	11.75	5.04	1.08
98	10.42		3.43	1.72	75	11.00	4.00	1.44
149	10.04		2.37	2.20	100	10.41	3.38	1.75
195	9.67		2.25	2.28	150	10.04	2.36	2.20
241	9.32		1.78	2.40	200	9.63	2.21	2.30
289	8.36		1.93	2.43	250	9.22	1.78	2.41

BLACK DOUGLAS; September 9, 1951; 1640 GCT; 33°24.5'N, 117°55'W; sounding, 310 fm; wind, 290°, force 1; weather, fog; sea, slight; wire angle, 00°. 90.30

0	-		5.21	0.54	0	20.1	5.21	0.54
10	19.70	33.39	5.32	0.52	10	19.70	5.32	0.52
25	-		5.84	0.54	20	17.1	5.65	0.53
50	-		6.11	0.66	30	16.1	5.97	0.55
74	-		4.27	-	50	14.0	6.11	0.66
98	10.48		4.18	1.46	75	11.8	4.26	0.97
149	10.01		2.44	2.12	100	10.4	4.18	1.50
193	9.70		2.04	2.22	150	10.01	2.42	2.13
239	8.53		2.51	2.23	200	9.60	2.09	2.22
287	8.11		2.05	2.40	250	8.38	2.46	2.25
339	8.00		1.31	2.64	300	8.07	1.88	2.47
387	7.74		0.84	2.84	400	7.54	0.79	2.86
436	6.94		0.69	2.88				

BLACK DOUGLAS; September 9, 1951; 2048 GCT; 33°11'N, 118°23.5'W; sounding, 650 fm; wind, 280°, force 2; weather, cloudy; sea, moderate; wire angle, 00°. 90.37

0	-		5.28	-	0	19.5	5.28	
10	18.82	33.39	5.42	0.57	10	18.82	5.42	0.57
25	-		5.91	0.56	20	16.6	5.88	0.56
50	-		5.68	0.84	30	15.1	5.90	0.58
74	-		5.26	1.20	50	12.8	5.68	0.84
98	9.95		3.61	1.63	75	10.5	5.20	1.20
150	9.10		2.90	2.06	100	9.9	3.56	1.66
197	8.75		2.31	-	150	9.10	2.90	2.06
291	8.35		1.21	2.76	200	8.72	2.23	2.26
391	7.27		0.89	2.82	250	8.54	1.54	2.57
485	6.63		0.72	3.00	300	8.29	1.17	2.78
583	5.96		0.47	3.08	400	7.20	0.88	2.84
677	5.42		0.37	3.18	500	6.54	0.69	3.01
777	4.92		0.39	3.20	600	5.85	0.44	3.10
972	4.26		0.49	-	700	5.30	0.38	3.19
					800	4.82	0.40	
					1000	(4.19)	(0.50)	

S10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.45	BLACK DOUGLAS; September 10, 1951; 0225 GCT; 32°54.5'N, 118°56'W; sounding, 960 fm; wind, 280°, force 3; weather, overcast; sea, moderate; wire angle, 28°.							
0	-		5.75	0.67	0	17.2	5.75	0.67
8	17.10	33.46	5.74	0.64	10	17.1	5.75	0.63
22	-		5.79	0.62	20	16.7	5.79	0.62
44	-		5.60	0.96	30	16.1	5.76	0.65
64	-		4.58	1.38	50	12.2	5.30	1.11
84	9.88		3.80	1.66	75	10.4	4.00	1.56
125	9.05		3.22	1.95	100	9.6	3.55	1.78
161	8.54		2.56	2.13	150	8.69	2.80	2.07
234	8.02		1.66	2.55	200	8.23	2.04	2.39
312	7.66		1.19	2.70	250	7.94	1.55	2.58
385	7.09		0.79	2.86	300	7.72	1.26	2.67
462	6.66		0.58	2.96	400	7.00	0.74	2.88
612	5.58		0.37	3.06	500	6.40	0.51	2.98
764	4.81		0.43	3.14	600	5.68	0.38	3.05
952	4.17		0.48	3.16	700	5.11	0.40	3.12
					800	4.68	0.42	3.15
					1000	(4.00)	(0.51)	(3.16)
90.53	BLACK DOUGLAS; September 10, 1951; 0825 GCT; 32°38.5'N, 119°29'W; sounding, 720 fm; wind, 280°, force 2; weather, drizzle; sea, moderate; wire angle, 12°.							
0	-		5.33	0.56	0	17.0	5.33	0.56
10	16.99	33.15	4.70	0.56	10	16.99	4.70	0.56
24	-		5.14	0.55	20	17.0	4.92	0.55
49	-		5.33	0.66	30	15.8	5.23	0.56
73	-		4.89	1.55u	50	13.4	5.34	0.68
97	10.04		4.00	1.40	75	11.0	4.83	
148	9.04		2.93	2.00	100	10.0	3.92	1.46
193	8.44		2.52	2.14	150	9.00	2.90	2.02
284	7.16		2.01	2.48	200	8.34	2.48	2.17
381	6.54		1.04	2.78	250	7.61	2.21	2.36
473	5.96		0.70	3.01	300	7.03	1.90	2.53
571	5.42		0.45	3.18	400	6.43	0.95	2.83
761	4.79		0.37	3.27	500	5.80	0.62	3.06
951	4.16		0.58	3.23	600	5.30	0.42	3.20
1153	3.84		0.61	3.23	700	4.99	0.39	3.26
					800	4.62	0.40	3.26
					1000	4.05	0.60	3.23
90.60	BLACK DOUGLAS; September 10, 1951; 1329 GCT; 32°25'N, 119°57.5'W; sounding, 550 fm; wind, 290°, force 2; weather, overcast; sea, very rough; wire angle, 04°.							
0	-		4.04u	0.53	0	17.5		0.53
10	17.51	33.30	5.12	0.53	10	17.51	5.12	0.53
25	-		3.72u	0.53	20	17.5		0.52
50	-		5.32	0.58	30	17.3		0.53
75	-		4.89	0.82	50	15.4	5.32	0.58
99	9.86		4.31	-	75	12.4	4.89	0.82
152	8.88		2.91	-	100	9.9	4.28	1.40
199	8.24		2.52	2.08	150	8.91	2.95	1.89
246	7.66		2.28	2.24	200	8.22	2.51	2.09
292	7.20		2.02	2.50	250	7.61	2.26	2.26
390	-		0.74	-	300	7.13	1.95	2.54
482	5.64		0.61	3.15	400	6.20	0.70	3.01
579	5.37		0.35	3.22	500	5.58	0.56	3.17
672	4.99		0.33	-	600	5.30	0.33	3.26
776	4.56		0.41	3.38	700	4.85	0.33	3.38

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

BLACK DOUGLAS; September 10, 1951; 2007 GCT; 32°04.5'N, 120°39'W; sounding, 2100 fm; wind, 300°, force 3; weather, cloudy; sea, rough; wire angle, 08°. 90.70

0	-		5.57	0.54	0	16.9	5.57	0.54
10	16.89	33.51	5.57	0.49	10	16.89	5.57	0.49
25	-		5.47	0.50	20	16.8	5.51	0.49
50	-		5.04	1.05	30	16.6	5.40	0.52
74	-		3.60	1.80	50	12.5	5.04	1.05
97	9.40		3.14	-	75	10.0	3.65	1.82
148	8.66		2.31	2.24	100	9.3	3.08	2.00
193	8.23		2.06	2.38	150	8.64	2.29	2.24
284	6.98		1.46	2.73	200	8.16	2.00	2.41
381	6.58		-	2.94	250	7.40	1.65	2.61
473	-		0.46	-	300	6.89	1.35	2.77
569	5.32		0.39	-	400	6.50	0.78	(2.98)
756	4.52		0.46	3.22	500	5.84	0.41	(3.09)
940	4.00		0.60	3.20	600	5.15	0.40	(3.15)
1139	3.51		0.81	3.14	700	4.73	0.43	(3.21)
					800	4.39	0.49	3.22
					1000	3.85	0.66	3.20

BLACK DOUGLAS; September 9, 1951; 0933 GCT; 32°56'N, 117°19'W; sounding, 80 fm; wind, calm; weather, fog; sea, slight; wire angle, 00°. 93.27

0	19.12		4.41	0.63	0	19.12	4.41	0.63
10	15.00	33.23	5.55	0.66	10	15.00	5.55	0.66
35	12.01		4.62	1.10	20	13.60	5.05	0.72
60	10.93		4.18	1.52	30	12.73	4.71	0.94
85	10.81		3.93	1.58	50	11.05	4.34	1.42
					75	10.85	4.03	1.57

BLACK DOUGLAS; September 9, 1951; 0617 GCT; 32°50'N, 117°31.5'W; sounding, 460 fm; wind, calm; weather, overcast; sea, slight; wire angle, 00°. 93.30

0	-		5.27	0.50	0	20.2	5.27	0.50
10	19.93	33.42	5.28	0.55	10	19.93	5.28	0.55
25	-		5.88	0.57	20	17.7	5.80	0.56
50	-		5.79	0.86	30	16.3	5.90	0.57
75	-		4.47	1.46	50	12.2	5.79	0.86
99	10.68		3.77	1.69	75	10.8	4.47	1.46
152	9.89		2.65	2.18	100	10.6	3.74	1.70
199	9.61		1.90	-	150	9.90	2.70	2.16
245	9.29		1.74	2.55	200	9.60	1.89	2.38
289	8.72		1.46	2.66	250	9.22	1.71	2.56
340	8.18		1.12	2.86	300	8.60	1.38	2.70
386	7.58		0.94	2.98	400	7.43	0.89	3.02
478	6.74		0.63	3.17	500	6.55	0.54	3.20
578	5.96		0.35	3.27	600	5.81	0.35	
677	5.36		0.36	-				

BLACK DOUGLAS; September 8, 1951; 2359 GCT; 32°30'N, 118°12.5'W; sounding, 920 fm; wind, 260°, force 1; weather, overcast; sea, moderate; wire angle, 00°. 93.40

0	-		5.39	0.64	0	18.1	5.39	0.64
10	17.68	33.43	5.51	0.60	10	17.68	5.51	0.60
25	-		5.68	0.54	20	17.4	5.65	0.56
50	-		5.31	1.15	30	16.1	5.67	0.55
74	-		4.64	1.55	50	12.0	5.31	1.15
98	9.26		3.98	1.84	75	10.3	4.66	1.56
151	8.48		3.47	2.08	100	9.2	3.93	1.84
197	8.13		2.59	2.35	150	8.50	3.48	2.07
289	7.60		1.38	2.68	200	8.11	2.50	2.37
386	6.76		0.95	3.04	250	7.82	1.72	2.53
479	6.03		0.58	3.18	300	7.51	1.31	2.73
577	5.70		0.39	3.27	400	6.64	0.89	3.06
768	4.93		0.38	3.36	500	5.94	0.50	3.21
958	4.12		0.52	3.40	600	5.62	0.39	3.28
1160	3.38		0.87	-	700	5.23	0.39	3.33
					800	4.80	0.40	3.38
					1000	3.98	0.58	(3.39)

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
93.50	BLACK DOUGLAS; September 8, 1951; 1727 GCT; 32°10'N, 118°53.5'W; sounding, 810 fm; wind, 290°, force 2; weather, overcast; sea, rough; wire angle, 06°.							
0	-		5.46	0.60	0	16.9	5.46	0.60
10	16.94	33.24	5.49	0.60	10	16.94	5.49	0.60
25	-		5.54	0.61	20	16.9	5.53	0.61
50	-		5.91	0.61	30	16.9	5.60	0.61
74	-		5.98	0.62	50	15.4	5.91	0.61
98	11.88		5.32	0.92	75	13.6	5.98	0.62
149	9.73		3.78	1.84	100	11.8	5.25	0.95
195	8.64		3.10	2.10	150	9.70	3.74	1.85
285	7.83		2.10	2.60	200	8.59	3.04	2.13
380	7.02		1.12	3.01	250	8.11	2.48	2.42
471	5.79		0.84	3.24	300	7.72	1.93	2.67
566	5.35		0.54	3.30	400	6.80	1.04	3.08
754	4.84		0.43	3.34	500	5.62	0.73	3.26
943	4.21		0.54	3.31	600	5.24	0.50	3.32
1143	3.66		0.73	3.22	700	4.99	0.43	3.34
					800	4.70	0.42	3.34
					1000	4.03	0.61	3.29
97.30	BLACK DOUGLAS; September 7, 1951; 2204 GCT; 32°15.5'N, 117°09'W; sounding, 35 fm; wind, 290°, force 1; weather, dry haze; sea, moderate; wire angle, 00°.							
0	17.91		5.82	0.60	0	17.91	5.82	0.60
10	17.38	33.30	5.88	0.64	10	17.38	5.88	0.64
25	13.23		5.98	0.76	20	14.00	5.96	0.70
50	10.94		4.28	1.46	30	12.90	5.95	0.83
					50	10.94	4.28	1.46
97.32	BLACK DOUGLAS; September 7, 1951; 2340 GCT; 32°11.5'N, 117°17'W; sounding, 750 fm; wind, 290°, force 2; weather, dry haze; sea, moderate; wire angle, 09°.							
0	-		5.39	0.60	0	19.7	5.39	0.60
10	19.64	33.40	5.29	0.75	10	19.64	5.29	0.75
25	-		5.83	0.70	20	18.2	5.80	0.70
49	-		5.66	0.84	30	15.6	5.84	0.71
73	-		4.70	1.34	50	13.1	5.62	0.85
97	10.05		4.02	1.62	75	11.3	4.65	1.34
147	9.71		3.04	2.10	100	10.0	3.94	1.66
193	9.17		2.50	2.34	150	9.66	2.99	2.12
284	9.04		1.02	2.71	200	9.13	2.40	2.37
381	7.64		0.84	2.88	250	9.09	1.45	2.59
473	6.72		0.66	3.06	300	8.89	0.95	2.73
569	6.04		0.40	3.14	400	7.40	0.80	2.92
758	5.04		0.36	3.17	500	6.51	0.59	3.09
946	4.22		0.53	3.22	600	5.84	0.38	3.14
1147	3.46		0.80	3.28	700	5.31	0.34	3.16
					800	4.84	0.36	3.18
					1000	4.00	0.62	3.23

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

BLACK DOUGLAS; September 8, 1951; 0456 GCT; 31°55.5'N, 117°50'W; sounding, 600 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 01°. 97.40

0	-		5.52	0.60	0	17.3	5.52	0.60
10	17.33	33.42	5.52	0.60	10	17.33	5.52	0.60
25	-		5.57	0.60	20	17.0	5.54	0.60
50	-		5.94	0.64	30	16.8	5.62	0.60
75	-		5.36	1.02	50	14.7	5.94	0.64
99	10.63		4.98	1.22	75	11.7	5.36	1.02
152	9.52		3.20	1.89	100	10.6	4.93	1.24
199	9.11		2.60	-	150	9.55	3.23	1.87
292	7.87		1.53	2.70	200	9.10	2.58	2.16
388	7.14		0.82	3.01	250	8.45	1.99	2.48
480	6.56		0.49	-	300	7.80	1.45	2.73
577	5.99		0.30	3.31	400	7.06	0.76	3.04
767	4.80		0.39	-	500	6.44	0.42	3.22
957	4.22		0.52	3.42	600	5.83	0.30	(3.33)
					700	5.18	0.35	(3.37)
					800	4.66	0.41	(3.40)
					1000	(4.14)	(0.55)	

BLACK DOUGLAS; September 8, 1951; 1050 GCT; 31°35.5'N, 118°30.5'W; sounding, 1320 fm; wind, 320°, force 2; weather, overcast; sea, rough; wire angle, 06°. 97.50

0	-		-	0.56	0	17.0	(5.50)	0.56
10	16.99	33.28	5.50	0.60	10	16.99	5.50	0.60
25	-		5.47	0.58	20	17.0	5.48	0.59
50	-		5.80	0.60	30	17.0	5.50	0.58
74	-		5.62	0.80	50	15.1	5.80	0.60
98	11.13		5.02	1.26	75	12.6	5.60	0.82
150	9.46		3.31	1.96	100	11.0	4.97	1.30
196	8.83		2.50	2.24	150	9.46	3.31	1.96
290	8.20		1.40	2.77	200	8.80	2.42	2.26
388	7.54		0.79	-	250	8.48	1.83	2.58
482	6.58		0.63	3.40	300	8.12	1.32	2.80
581	5.99		0.43	3.39	400	7.43	0.76	3.14
774	4.87		0.36	3.31	500	6.45	0.60	3.40
964	4.13		0.61	-	600	5.87	0.40	3.38
1165	3.60		0.77	3.23	700	5.26	0.36	3.32
					800	4.75	0.37	3.31
					1000	4.03	0.66	3.31

BLACK DOUGLAS; September 7, 1951; 1459 GCT; 31°42'N, 116°43.5'W; sounding, 45 fm; wind, 300°, force 1; weather, overcast; sea, moderate; wire angle, 00°. 100.29

0	14.10		5.94	0.78	0	14.10	5.94	0.78
10	13.22	33.33	5.83	0.81	10	13.22	5.83	0.81
25	12.27		5.13	1.02	20	12.52	5.50	0.92
50	11.60		4.38	1.44	30	12.10	4.90	1.14
75	11.13		3.90	1.60	50	11.60	4.38	1.44
					75	11.13	3.90	1.60

BLACK DOUGLAS; September 7, 1951; 1307 GCT; 31°40.5'N, 116°46.5'W; sounding, 240 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 04°. 100.30

0	-		5.75	0.59	0	16.3	5.75	0.59
10	16.25	33.31	-	0.58	10	16.25	5.50	0.58
26	12.96		5.17	0.94	20	13.40	5.29	0.80
50	11.95		4.55	1.36	30	12.79	5.09	1.04
74	11.34		3.78	1.50	50	11.95	4.55	1.36
99	10.66		3.33	1.83	75	11.31	3.76	1.50
151	10.14		2.71	2.06	100	10.63	3.32	1.84
197	9.76		1.97	2.37	150	10.15	2.73	2.05
243	9.55		1.75	2.52	200	9.74	1.95	2.38
288	8.94		1.26	2.66	250	9.50	1.70	2.54
339	8.18		0.79	2.96	300	8.70	1.11	2.74
389	7.80		0.69	-				

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
100.40	BLACK DOUGLAS; September 7, 1951; 0510, 0600 GCT; 31°21'N, 117°27'W; sounding, 1040 fm; wind, 300°, force 3; weather, overcast; sea, very rough; wire angle, 34°, 35°.							
0	-		5.56	0.57	0	17.8	5.56	0.57
8	17.80	33.34	5.53	0.58	10	17.8	5.54	0.58
19	-		5.58	0.60	20	17.7	5.57	0.60
40	-		5.98	0.67	30	16.6	5.84	0.62
60	-		5.13	1.12	50	12.7	5.92	0.80
78	11.24		4.84	1.26	75	11.5	4.88	1.23
					100	10.8	4.30	1.49
78a)	11.46		-	-	150	9.56	3.24	(1.94)
120	10.04		3.76	1.72	200	9.00	2.35	(2.31)
156	9.47		3.15	-	250	8.54	1.69	(2.57)
230	8.72		1.86	-	300	8.05	1.34	(2.74)
308	7.98		1.29	2.76	400	7.18	0.73	2.94
381	7.35		0.83	2.90	500	6.38	0.48	3.08
459	6.64		0.52	3.05	600	5.84	0.41	3.15
615	5.77		0.40	3.18	700	5.34	0.38	3.22
782	4.94		0.34	3.26	800	4.86	0.35	
972	4.14		0.60	-	1000	(4.04)	(0.64)	
100.50	BLACK DOUGLAS; September 6, 1951; 2100 GCT; 31°01'N, 118°07'W; sounding, 940 fm; wind, 300°, force 4; weather, cloudy; sea, very rough; wire angle, 09°.							
0	-		5.34	0.56	0	18.9	5.34	0.56
10	18.92	33.55	5.34	0.56	10	18.92	5.34	0.56
25	-		5.32	0.54	20	18.9	5.33	0.54
49	-		6.51	0.69	30	18.7	5.38	0.55
73	-		4.20	1.55	50	13.2	6.51	0.72
98	9.46		3.56	-	75	10.5	4.10	1.60
150	8.68		2.81	2.16	100	9.4	3.52	1.91
196	8.00		2.54	2.30	150	8.68	2.81	2.16
287	7.52		1.17	-	200	7.99	2.50	(2.32)
383	7.04		0.47	3.02	250	7.69	1.73	(2.56)
473	6.25		0.40	3.12	300	7.46	1.03	(2.78)
570	5.36		0.38	3.19	400	6.92	0.44	3.04
761	4.76		0.38	-	500	6.00	0.39	3.14
951	4.11		0.57	3.20	600	5.23	0.38	(3.20)
1151	3.52		0.39u	3.15	700	4.92	0.38	(3.20)
					800	4.64	0.40	(3.20)
					1000	3.96	(0.60)	3.19
100.60	BLACK DOUGLAS; September 6, 1951; 1247 GCT; 30°41'N, 118°47.5'W; sounding, 1580 fm; wind, 340°, force 5; weather, overcast; sea, very rough; wire angle, 00°.							
0	-		5.30	0.52	0	18.8	5.30	0.52
10	18.82	33.54	5.30	0.53	10	18.82	5.30	0.53
25	-		5.32	0.57	20	18.8	5.31	0.56
50	-		6.30	0.66	30	18.7	5.36	0.58
75	-		5.25	1.15	50	13.7	6.30	0.66
99	9.51		4.06	1.67	75	11.7	5.25	1.15
151	9.21		2.74	2.07	100	9.5	4.03	1.69
198	8.59		2.27	2.32	150	9.21	2.77	2.06
291	7.31		1.42	2.73	200	8.55	2.24	2.33
388	6.82		0.65	3.01	250	7.80	1.80	2.56
481	5.90		0.48	3.20	300	7.26	1.33	2.76
579	5.36		0.40	3.22	400	6.72	0.61	3.04
774	4.72		0.42	3.34	500	5.79	0.45	3.21
966	4.07		0.58	-	600	5.26	0.40	3.24
1169	3.53		0.52u	-	700	4.95	0.41	3.32
					800	4.63	0.43	
					1000	3.95	(0.60)	

a) Overlapping casts; reconciliation of temperature curve.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

100.70

BLACK DOUGLAS; September 6, 1951; 0530 GCT; 30°20.5'N, 119°27'W; sounding, 2100 fm; wind, 340°, force 5; weather, overcast; sea, very rough; wire angle, 02°.

0	-		5.30	0.60	0	18.8	5.30	0.60
10	18.75	33.49	5.33	0.63	10	18.75	5.33	0.63
25	-		5.71	0.62	20	17.5	5.60	0.62
50	-		5.92	-	30	16.5	5.80	0.63
74	-		5.51	1.02	50	14.2	5.92	0.70
98	10.77		5.02	1.26	75	11.8	5.49	1.03
150	9.10		3.30	2.03	100	10.7	4.97	1.28
197	8.28		2,98	2.08	150	9.10	3.30	2.03
291	7.35		1.66	2.66	200	8.23	2.94	2.09
388	6.93		0.71	3.04	250	7.69	2.23	2.38
481	6.26		0.46	3.14	300	7.30	1.54	2.69
580	5.65		0.33	-	400	6.85	0.65	3.05
774	4.72		0.44	3.40	500	6.12	0.42	(3.16)
965	4.05		0.58	3.11	600	5.54	0.32	(3.26)
1168	3.47		-	3.05	700	5.05	0.38	(3.38)
					800	4.61	0.48	3.36
					1000	3.94	(0.58)	3.08

100.80

BLACK DOUGLAS; September 5, 1951; 2201 GCT; 30°01'N, 120°07'W; sounding, 2240 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 18°.

0	-		5.27	0.58	0	19.2	5.27	0.58
9	19.16	33.58	5.22	0.60	10	19.2	5.22	0.61
23	-		5.23	0.62	20	19.2	5.22	0.62
46	-		6.04	0.61	30	19.2	5.30	0.62
67	-		6.02	0.80	50	14.7	6.04	0.64
88	11.21		4.74	1.37	75	12.4	5.98	0.96
129	9.50		2.97	2.08	100	10.4	3.95	1.69
167	8.66		2.91	-	150	8.93	2.92	2.20
243	7.99		1.90	2.51	200	8.34	2.55	2.35
322	7.34		1.10	2.84	250	7.95	1.81	2.54
399	6.13		0.92	3.04	300	7.53	1.26	2.75
478	5.52		0.59	3.23	400	6.12	0.91	3.04
634	5.14		0.39	3.38	500	5.46	0.54	3.26
790	4.57		0.49	3.04	600	5.23	0.42	3.36
979	3.90		0.56	3.04	700	4.90	0.41	3.30
					800	4.54	0.50	3.03
					1000	(3.82)	(0.56)	(3.05)

100.90

BLACK DOUGLAS; September 5, 1951; 1433 GCT; 29°40.5'N, 120°47'W; sounding, 2160 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 20°.

0	-		4.31	0.59	0	18.0	4.31	0.59
9	18.05	33.48	5.35	0.60	10	18.0	5.35	0.60
23	-		5.34	0.62	20	18.0	5.35	0.62
51	-		5.35	0.63	30	18.0	5.34	0.63
72	-		5.67	0.65	50	17.9	5.35	0.63
98	14.07		-	-	75	15.9	5.67	0.65
142	11.16		4.13	1.52	100	13.9	4.99	0.96
186	9.52		3.93	1.64	150	10.80	4.10	1.54
274	7.96		2.73	2.22	200	9.22	3.78	1.71
368	6.83a)		1.58	2.76	250	8.35	3.08	2.04
456	5.89		1.01	-	300	7.62	2.39	2.39
543	5.34		0.62	3.20	400	6.49	1.32	2.90
715	4.70		0.34	-	500	5.60	0.81	3.17
900	4.07		0.55	3.24	600	5.10	0.48	(3.22)
1095	3.57		1.28	-	700	4.75	0.34	(3.24)
					800	4.40	0.38	(3.24)
					1000	3.78	0.82	

a) Alternate value, 6.68°C, not used in interpolation.

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5109

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
103.30	BLACK DOUGLAS; September 1, 1951; 0827 GCT; 31°05'N, 116°25'W; sounding, 39 fm; wind, 300°, force 3; weather, clear; sea, rough; wire angle, 09°.							
0	19.24		5.22	0.49	0	19.24	5.22	0.49
10	19.24	33.46	5.24	0.50	10	19.24	5.24	0.50
25	15.90		5.82	0.52	20	18.00	5.74	0.51
49	12.57		4.55	0.99	30	14.50	5.81	0.55
74	12.03		4.60	-	50	12.55	4.55	
					75	(12.02)	(4.60)	
103.35	BLACK DOUGLAS; September 1, 1951; 1209 GCT; 30°55.5'N, 116°45'W; sounding, 1100 fm; wind, 300°, force 3; weather, cloudy; sea, rough; wire angle, 11°.							
0	-		5.62	-	0	19.9	5.62	
10	19.81	33.53	5.22	0.63	10	19.81	5.22	0.63
25	-		5.19	0.55	20	19.8	5.19	0.56
49	-		5.98	0.62	30	19.1	5.24	0.56
73	-		5.93	-	50	15.8	5.98	0.62
98	12.22		5.22	1.06	75	13.8	5.92	0.75
149	10.06		3.56	1.67	100	12.1	5.11	1.09
195	9.40		2.71	2.04	150	10.03	3.53	1.68
287	7.84		1.96	2.44	200	9.31	2.66	2.06
383	7.23		0.88	2.80	250	8.45	2.22	2.28
475	6.86		0.47	2.96	300	7.72	1.80	2.48
571	5.90		0.37	-	400	7.16	0.77	2.82
757	4.87		0.39	-	500	6.65	0.40	2.95
941	4.23		0.54	3.35	600	5.70	0.38	(3.14)
1140	3.62		0.71	3.16	700	5.14	0.39	(3.20)
					800	4.70	0.41	(3.27)
					1000	4.08	0.62	3.32
103.40	BLACK DOUGLAS; September 1, 1951; 1639 GCT; 30°45.5'N, 117°05.5'W; sounding, 800 fm; wind, 300°, force 3; weather, cloudy; sea, rough; wire angle, 15°.							
0	-		5.17	-	0	19.7	5.17	
9	19.68	33.48	4.84	-	10	19.7	4.84	
24	-		5.48	0.62	20	18.3	5.30	
48	-		5.62	0.63	30	17.4	5.54	0.61
72	-		5.81	-	50	15.8	5.62	0.63
95	12.19		5.52	0.91	75	14.2	5.80	0.72
146	9.34		3.78	1.66	100	11.8	5.40	1.00
191	8.62		2.93	2.00	150	9.24	3.66	1.71
280	7.54		1.76	2.42	200	8.50	2.80	2.04
372	7.40		0.64	-	250	7.81	2.12	2.26
461	6.88		0.48	3.04	300	7.50	1.50	2.55
554	5.74		0.49	-	400	7.29	0.57	2.99
738	5.05		0.41	3.20	500	6.46	0.47	(3.10)
924	4.34		0.52	3.27	600	5.53	0.49	(3.18)
1122	3.79		0.72	3.27	700	5.18	0.42	(3.18)
					800	4.82	0.43	3.22
					1000	4.09	0.57	3.27
107.32	BLACK DOUGLAS; September 2, 1951; 0640 GCT; 30°26'N, 116°11'W; sounding, 240 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 13°.							
0	17.12		4.94	0.56	0	17.12	4.94	0.56
10	17.11	33.36	5.65	0.60	10	17.11	5.65	0.60
24	16.85		5.89	0.58	20	17.00	5.85	0.58
48	12.84		5.43	0.92	30	16.50	5.89	0.60
69	11.04		2.98	1.91	50	12.05	5.00	1.00
90	10.82		2.50	-	75	10.95	2.79	
139	-		1.03u	-	100	10.74	(2.41)	
182	10.30		0.85u	2.76u	150	10.46	(2.08)	
227	9.80		1.76	2.46	200	10.14	(1.83)	
272	8.58		1.98	2.45	250	9.16	1.87	2.46
326	8.17		1.34	2.67	300	8.31	1.71	2.53

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; September 2, 1951; 0244 GCT; 30°20'N, 116°23'W; sounding, 1000 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 29°.								107.35
0	-		5.18	0.58	0	19.4	5.18	0.58
8	19.44	33.49	5.15	0.58	10	19.4	5.16	0.57
22	-		5.31	0.56	20	19.4	5.27	0.56
49	-		5.58	0.58	30	19.0	5.41	0.56
69	-		5.79	0.67	50	16.0	5.59	0.58
94	11.73		-	0.97	75	13.0	5.76	0.72
135	10.62		2.86	0.62u	100	11.5	4.00	1.01
174	9.58		2.63	1.16	150	10.20	2.74	
250	9.21		1.58	2.28	200	9.43	2.40	1.58
332	8.51		0.89	-	250	9.21	1.58	2.28
412	6.90		0.99	3.04	300	8.85	1.08	2.57
491	6.55		0.52	3.14	400	7.01	0.97	3.02
655	5.54		0.31	3.31	500	6.52	0.50	3.16
836	4.50		0.43	3.41	600	5.95	0.34	3.27
1028	3.80		0.63	-	700	5.26	0.31	3.34
					800	4.68	0.39	3.39
					1000	3.89	0.62	
BLACK DOUGLAS; September 2, 1951; 1158 GCT; 29°50.5'N, 115°52'W; sounding, 85 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 07°.								110.33
0	15.77		5.60	0.78	0	15.77	5.60	0.78
10	15.76	33.39	5.65	0.80	10	15.76	5.65	0.80
25	13.32		5.01	1.10	20	14.70	5.50	0.96
50	11.48		3.86	1.51	30	12.44	4.80	1.19
74	11.19		3.53	1.59	50	11.48	3.86	1.51
					75	(11.19)	(3.52)	
BLACK DOUGLAS; September 2, 1951; 1435 GCT; 29°46.5'N, 116°00'W; sounding, 980 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 14°.								110.35
0	-		5.36	0.57	0	18.9	5.36	0.57
10	18.88	33.45	5.31	0.56	10	18.88	5.31	0.56
24	-		5.76	0.58	20	18.7	5.70	0.57
48	-		4.97	0.92	30	15.4	5.74	0.65
73	-		4.53	1.14	50	12.9	4.91	0.94
96	10.97		3.03	1.90	75	11.5	4.49	1.36
147	10.75		2.17	2.14	100	10.9	2.89	1.92
192	10.46		1.22	-	150	10.73	2.11	(2.18)
280	9.06		1.28	2.68	200	10.35	1.18	(2.49)
366	8.44		0.50	2.92	250	9.50	1.21	(2.60)
453	7.51		0.39	3.07	300	8.91	1.19	2.74
541	6.53a)		0.34	3.14	400	8.12	0.42	2.99
718	5.30		0.32	-	500	6.98	0.36	3.10
901	4.06		0.56	-	600	6.05	0.33	
1096	3.50		-	-	700	5.40	0.33	
					800	4.73	0.40	
					1000	3.75		

a) Alternate value, 7.02°C, not used in interpolation.

S10 CCOFI 5109	OBSERVED					INTERPOLATED			
	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
110.40	BLACK DOUGLAS; September 3, 1951; 2225 GCT; 29°36.5'N, 116°19.5'W; sounding, 700 fm; wind, 310°, force 4; weather, overcast; sea, very rough; wire angle, 05°.								
	0	-		5.34	0.55	0	18.3	5.34	0.55
	10	18.28	33.39	5.40	0.54	10	18.28	5.40	0.54
	25	-		5.63	0.52	20	18.0	5.61	0.52
	50	-		5.02	1.00	30	16.6	5.61	0.53
	74	-		4.19	1.45	50	12.8	5.02	1.00
	98	10.46		3.82	1.54	75	11.2	4.19	1.45
	150	9.69		2.57	-	100	10.4	3.79	1.55
	196	9.38		1.89	2.32	150	9.69	2.57	2.11
	288	8.52		1.09	2.77	200	9.36	1.85	2.34
	384	7.61		0.75	3.04	250	8.90	1.36	2.60
	477	6.97		0.38	3.12	300	8.39	1.02	2.81
	574	6.01		0.34	3.26	400	7.49	0.69	3.06
	764	4.87		0.37	3.23	500	6.78	0.36	3.15
	955	4.06		0.59	3.20	600	5.80	0.35	3.27
	1157	3.50		-	-	700	5.18	0.37	3.26
						800	4.70	0.40	3.22
						1000	3.90	(0.68)	
110.50	BLACK DOUGLAS; September 4, 1951; 0458 GCT; 29°16.5'N, 116°59'W; sounding, 1950 fm; wind, 330°, force 3; weather, overcast; sea, rough; wire angle, 14°.								
	0	-		5.25	0.53u	0	19.5	5.25	
	10	19.47	33.49	5.22	0.70	10	19.47	5.22	0.70
	24	-		5.23	-	20	19.4	5.21	0.71
	48	-		5.44	0.76	30	19.2	5.29	0.73
	72	-		5.41	1.10	50	18.2	5.44	0.77
	95	11.30		4.14	1.58	75	13.0	5.39	1.13
	145	10.13		1.69	2.54	100	11.1	3.80	1.66
	189	10.04		1.47	2.56	150	10.11	1.65	2.54
	278	9.60		0.70	2.86	200	10.00	1.39	2.58
	371	9.00		0.57	3.08	250	9.75	0.87	2.78
	460	7.85		0.39	3.22	300	9.48	0.63	2.92
	554	6.54		0.38	-	400	8.71	0.51	3.13
	735	5.52		0.29	3.50	500	7.21	0.38	(3.29)
	917	4.57		0.44	-	600	6.20	0.38	(3.41)
	1113	3.85		-	-	700	5.70	0.31	(3.49)
						800	5.18	0.32	
						1000	4.24		
110.60	BLACK DOUGLAS; September 4, 1951; 1140 GCT; 28°56.5'N, 117°39'W; sounding, 2000 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 14°.								
	0	-		5.30	0.56	0	19.5	5.30	0.56
	10	19.52	33.49	5.30	0.52	10	19.52	5.30	0.52
	24	-		5.32	0.52	20	19.5	5.31	0.52
	48	-		5.98	0.67	30	18.5	5.40	0.53
	72	-		5.25	1.03	50	14.3	5.96	0.69
	95	10.51		4.67	1.40	75	12.1	5.10	1.06
	144	9.65		3.01	2.00	100	10.4	4.52	1.46
	187	9.58		2.15	2.34	150	9.64	2.87	2.05
	276	9.08		0.70	2.76	200	9.50	1.90	2.41
	369	7.76		0.75	2.93	250	9.28	0.95	2.66
	457	6.69		0.56	3.15	300	8.82	0.68	2.81
	551	6.12		0.31	-	400	7.29	0.70	3.02
	735	5.04		0.33	3.24	500	6.40	0.45	(3.19)
	920	4.34		0.52	3.25	600	5.84	0.32	(3.23)
	1120	3.79		0.55	3.20	700	5.23	0.33	(3.24)
						800	4.75	0.40	3.24
						1000	4.11	0.53	3.25

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
BLACK DOUGLAS; September 2, 1951; 2303 GCT; 29°11'N, 114°55'W; sounding, 44 fm; wind, 310°, force 5; weather, partly cloudy; sea, very rough; wire angle, 15°.								115.27
0	19.06		5.24	-	0	19.06	5.24	
10	19.03	33.49	5.44	0.62	10	19.03	5.44	0.62
24	14.11		5.58	0.74	20	15.80	5.55	0.68
48	12.16		4.48	1.16	30	12.95	5.58	0.82
72	12.10		4.01	1.44	50	12.16	4.42	1.19
					75	(12.10)	(3.97)	(1.48)
BLACK DOUGLAS; September 3, 1951; 0130 GCT; 29°05'N, 115°08'W; sounding, 52 fm; wind, 310°, force 5; weather, partly cloudy; sea, very rough; wire angle, 12°.								115.30
0	19.00		5.53	0.66	0	19.00	5.53	0.66
10	19.00	33.49	5.50	0.64	10	19.00	5.50	0.64
24	17.69		5.73	0.62	20	18.30	5.68	0.63
49	12.23		4.91	1.12	30	16.70	5.70	0.64
73	11.37		3.60	1.65	50	12.20	4.88	1.14
					75	(11.31)	(3.50)	(1.67)
BLACK DOUGLAS; September 3, 1951; 0557 GCT; 28°55'N, 115°27.5'W; sounding, 670 fm; wind, 310°, force 6; weather, partly cloudy; sea, very rough; wire angle, 11°.								115.35
0	-		5.49	0.59	0	18.0	5.49	0.59
10	17.98	33.44	5.42	0.58	10	17.98	5.42	0.58
25	-		5.25	0.60	20	18.0	5.27	0.59
49	-		-	0.62	30	17.9	5.28	0.60
73	-		5.52	0.73	50	16.6	5.49	0.62
97	11.82		3.84	1.46	75	13.8	5.51	0.74
148	10.24		2.59	2.28	100	11.7	3.75	1.54
191	9.52		1.94	-	150	10.19	2.55	(2.29)
278	9.14		1.06	2.90	200	9.45	1.84	(2.48)
374	8.42		0.67	3.04	250	9.23	1.30	(2.76)
463	7.40		0.35	3.22	300	9.02	0.89	2.95
558	6.47		0.25	3.25	400	8.17	0.59	3.10
651	5.72		0.86u	-	500	7.03	0.29	3.24
750	4.95		0.35	3.24	600	6.11	0.26	3.27
849	4.46		-	-	700	5.33	0.31	3.27
					800	4.68		
BLACK DOUGLAS; September 3, 1951; 1044 GCT; 28°45'N, 115°47'W; sounding, 600 fm; wind, 320°, force 6; weather, overcast; sea, high; wire angle, 10°.								115.40
0	-		5.01	0.58	0		5.01	0.58
10	19.47	33.64	5.29	0.60	10	19.47	5.29	0.60
25	-		5.27	0.60	20		5.29	0.60
49	-		4.70	1.06	30		5.22	0.61
73	-		4.50	1.28	50		4.68	1.08
97	11.09		4.39	1.42	75		4.48	1.28
192	9.52		2.24	2.34	100		4.38	1.44
278	8.10		1.79	-	150		3.30	2.00
370	8.06		0.53	3.08	200	9.39	2.16	(2.37)
459	7.41		0.34	3.25	250	8.45	1.93	(2.48)
553	6.40		0.28	3.29	300	8.08	1.53	(2.70)
645	5.51		0.31	3.18	400	7.92	0.42	3.15
744	4.85a)		0.46	-	500	6.98	0.31	3.29
939	4.04		1.49u	-	600	5.93	0.29	3.24
					700	5.12	0.38	
					800	4.58		
					1000	(3.89)		

a) Alternate value, 4.92°C, not used in interpolation.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m
120.25	CREST; August 31, 1951; 0240 GCT; 28°23'N, 114°15'W; sounding, 30 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 00°.											
0	19.70	33.49E	5.18	0.45	0	19.70	33.49	5.18	0.45	23.71	420	0.00
10	-	33.42	5.10	0.42	10	19.62	33.42	5.10	0.42	23.68	422	0.04
20	18.97	33.49E	5.20	0.41	20	18.97	33.49	5.20	0.41	23.90	401	0.08
30	-	33.42E	5.56	0.48	30	17.30	33.42	5.56	0.48	24.25	368	0.12
40	14.84	33.39E	5.81	0.50	50	14.05	33.42	5.50	0.70	24.98	299	0.19
50	14.05	33.42E	5.50	0.70								
120.30	CREST; August 31, 1951; 0600 GCT; 28°13'N, 114°34'W; sounding, 50 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 13°.											
0	19.47	33.46E	5.17	0.45	0	19.47	33.46	5.17	0.45	23.75	416	0.00
10	-	33.40	5.15	-	10	19.48	33.40	5.15	0.40	23.69	421	0.04
19	19.48	33.48E	5.14	-	20	19.48	33.48	5.14	0.40	23.76	415	0.08
29	19.32	33.47E	5.15	0.40	30	19.31	33.47	5.16	0.40	23.80	411	0.12
38	-	33.49E	5.27	0.43	50	17.30	33.48	5.38	0.44	24.29	363	0.20
48	17.51	33.48E	5.37	0.44	75	13.65	33.38	5.33	0.61	25.04	294	0.28
57	-	33.44E	5.42	0.47								
67	14.70	33.40E	5.58	0.52								
76	13.55	33.38E	5.23	0.63								
120.35	CREST; August 31, 1951; 0815 GCT; 28°02'N, 114°54'W; sounding, 40 fm; wind, 300°, force 6; weather, clear; sea, rough; wire angle, 00°.											
0	19.59	33.72E	4.99	-	0	19.59	33.72	4.99		23.91	400	0.00
10	19.58	33.64	4.90	0.48	10	19.58	33.64	4.90	0.48	23.85	406	0.04
20	-	33.77E	5.04	0.50	20	19.80	33.77	5.04	0.50	23.89	402	0.08
30	19.83	33.80E	4.80	0.52	30	19.83	33.80	4.80	0.52	23.91	400	0.12
40	-	33.96E	4.76	0.59	50	18.67	33.91	4.78	0.64	24.29	364	0.20
50	18.67	33.91E	4.79	-								
60	-	33.71E	4.67	0.69								
120.45	CREST; August 31, 1951; 1356 GCT; 27°42.5'N, 115°33'W; sounding, 1580 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 18°.											
0	-	34.53E	4.33	0.66	0	22.9	34.53	4.33	0.66	23.63	427	0.00
10	22.92	34.54E	4.48	0.58	10	22.92	34.54	4.48	0.58	23.64	426	0.04
24	-	34.30uE	4.74	0.53	20	22.9	34.54	4.67	0.54	23.64	426	0.09
52	-	33.47E	5.12	0.73	30	19.4	34.10	4.88	0.53	24.25	368	0.12
76	-	33.48E	3.68	1.34	50	13.8	33.48	5.11	0.69	25.08	289	0.19
104	11.15	33.91E	2.71	1.84	75	12.0	33.48	3.75	1.32	25.43	256	0.26
155	11.12	34.31E	1.20	2.39	100	11.1	33.85	2.80	1.78	25.88	213	0.32
204	10.41	34.42E	1.10	2.50	150	11.12	34.29	1.25	2.36	26.22	180	0.42
301	9.56	34.52E	0.48	-	200	10.50	34.41	1.11	2.49	26.43	161	0.51
402	8.20	34.45E	0.59	-	250	9.94	34.48	0.82		26.58	147	0.58
499	6.19	34.32E	0.36	3.06	300	9.57	34.52	0.47		26.68	138	0.66
596	5.78	34.41E	0.32	3.13	400	8.24	34.45	0.59		26.82	123	0.79
785	4.83	34.51E	0.36	3.30	500	6.18	34.32	0.36	3.06	27.02	105	0.91
982	3.89	34.58E	0.66	3.54	600	5.77	34.41	0.32	3.13	27.14	93	1.02
1180	3.36	-	0.86	-	700	5.27	34.47	0.33	3.22	27.25	83	1.11
					800	4.76	34.51	0.37	3.32	27.34	74	1.20
					1000	3.83	(34.58)	0.68	(3.54)	(27.49)	(60)	(1.35)

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Crest samples on Cruise 5109, it is estimated that the mean effect of evaporation was 0.051‰, with a standard deviation of 0.051‰.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn m

CREST; August 31, 1951; 1737 GCT; 27°33'N, 115°52'W; sounding, 2150 fm; wind, 350°, force 5; weather, cloudy; sea, very rough; wire angle, 18°. 120.50

0	-	-	4.78	0.42	0	20.0	(33.53)	4.78	0.42	(23.66)	(424)	(0.00)
9	20.04	33.53E	4.98	0.42	10	20.0	33.53	4.98	0.42	23.66	424	0.04
23	-	33.54E	4.98	0.39	20	20.0	33.54	4.98	0.40	23.67	423	0.08
48	-	33.40E	5.60	0.38	30	19.8	33.53	5.26	0.38	23.72	419	0.13
71	-	33.30E	5.60	0.53	50	16.1	33.39	5.60	0.38	24.51	343	0.20
95	11.67	33.42E	4.63	1.10	75	13.1	33.30	5.57	0.60	25.08	289	0.28
145	10.04	-	3.12	1.82	100	11.3	33.48	4.49	1.31	25.56	244	0.35
191	8.77	34.04E	3.36	1.82	150	9.93	33.95	3.12	1.82	26.16	186	0.46
279	7.79	34.16E	2.07	2.39	200	8.56	34.06	3.27	1.85	26.48	157	0.55
373	8.00	34.47E	0.48	-	250	7.88	34.12	2.60	2.14	26.63	142	0.62
461	7.25	34.49E	0.29	3.08	300	7.84	34.22	1.64	2.57	26.71	135	0.70
552	6.48	34.49E	0.22	3.16	400	7.84	34.49	0.38	2.99	26.92	115	0.82
739	5.15	-	0.32	3.32	500	6.91	34.49	0.27	3.11	27.06	102	0.94
926	4.33	-	0.46	3.32	600	6.09		0.22	3.23			
1125	3.68	34.59E	0.71	3.21	700	5.38		0.27	3.31			
					800	4.85		0.39	3.32			
					1000	4.06		0.52	3.30			

CREST; August 31, 1951; 2234 GCT; 27°13.5'N, 116°31.5'W; sounding, 2100 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 15°. 120.60

0	-	33.48E	5.13	0.46	0	20.0	33.48	5.13	0.46	23.62	428	0.00
10	20.02	33.48	4.36	-	10	20.02	33.48	4.36	0.39	23.62	428	0.04
24	-	33.48E	4.99	0.39	20	19.9	33.48	4.83	0.39	23.65	425	0.09
53	-	33.55E	5.33	0.42	30	19.7	33.49	5.13	0.39	23.71	420	0.13
77	-	-	5.24	0.51	50	17.4	33.54	5.32	0.42	24.32	361	0.21
105	12.34	33.70E	4.54	0.89	75	16.3	33.61	5.28	0.49	24.63	332	0.29
156	10.74	33.94E	3.09	1.69	100	13.3	33.68	4.72	0.80	25.33	265	0.37
206	10.22	34.21E	1.86	-	150	10.92	33.91	3.22	1.55	25.96	205	0.49
305	9.51	34.48E	0.71	2.72	200	10.28	34.18	2.02	(2.18)	26.28	175	0.58
408	8.05	34.50E	0.37	3.01	250	9.92	34.36	1.09	(2.48)	26.49	155	0.67
508	6.93	-	0.36	3.07	300	9.56	34.47	0.72	(2.70)	26.63	142	0.75
607	6.01	34.41E	0.29	3.15	400	8.19	34.50	0.41	2.98	26.88	119	0.88
800	4.96	34.50E	0.32	3.21	500	7.02	34.46	0.37	3.07	27.01	106	1.00
997	4.16	-	0.69	-	600	6.06	34.41	0.30	3.14	27.10	97	1.11
1197	3.54	34.58E	0.70	3.17	700	5.45	34.45	0.29	3.19	27.21	87	1.21
					800	4.96	34.50	0.32	3.21	27.31	78	1.30
					1000	4.15	34.55	0.70	3.21	27.43	65	1.45

CREST; September 1, 1951; 0437 GCT; 26°52.5'N, 117°14'W; sounding, 2200 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 03°. 120.70

0	-	33.60E	4.76	-	0	21.0	33.60	4.76		23.45	444	0.00
10	20.88	33.55	4.86	0.36	10	20.88	33.55	4.86	0.36	23.44	445	0.04
25	-	33.63E	4.94	0.36	20	20.7	33.61	4.91	0.36	23.55	435	0.09
50	-	33.48E	5.64	0.46	30	20.7	33.63	5.00	0.37	23.54	436	0.13
74	-	33.55E	4.48	1.04	50	16.4	33.48	5.64	0.46	24.51	343	0.21
98	11.16	33.71E	3.58	1.46	75	12.6	33.55	4.45	1.04	25.37	261	0.29
151	9.58	34.08E	2.61	1.99	100	11.15	33.73	3.55	1.48	25.78	227	0.35
199	9.55	34.32E	1.59	-	150	9.58	34.07	2.63	1.98	26.32	171	0.45
292	9.47	34.61E	0.31	2.83	200	9.54	34.33	1.59	2.36	26.52	152	0.53
389	7.73	34.45E	0.46	2.95	250	9.51	34.58	0.63	2.69	26.65	140	0.61
482	6.77	34.46E	0.29	3.05	300	9.42	34.61	0.31	2.85	26.76	129	0.68
581	5.94	34.45E	0.25	3.16	400	7.60	34.45	0.45	2.96	26.92	114	0.80
771	5.02	34.54E	0.31	3.30	500	6.61	34.46	0.29	3.07	27.07	100	0.91
969	4.16	34.56E	0.47	3.21	600	5.83	34.45	0.25	3.18	27.16	91	1.02
1173	3.51	34.61E	0.76	3.21	700	5.33	34.51	0.28	3.26	27.27	81	1.11
					800	4.90	34.55	0.33	3.30	27.35	73	1.19
					1000	4.05	34.57	0.51	3.21	27.46	63	1.34

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m

120.80 CREST; September 1, 1951; 0936 GCT; 26°32'N, 117°56'W; sounding, 2200 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 32°.

0	-	33.66E	4.99	0.46	0	21.2	33.66	4.99	0.46	23.44	445	0.00
8	21.18	33.57	4.93	0.41	10	21.3	33.57	4.94	0.41	23.34	455	0.05
21	-	33.65E	5.04	0.42	20	21.2	33.65	5.04	0.42	23.43	446	0.09
43	-	-	5.72	0.58	30	17.3	33.64	5.30	0.46	24.42	352	0.13
64	-	33.54E	4.77	1.06	50	13.7	33.57	5.56	0.71	25.17	281	0.19
84	11.02	33.78E	3.30	1.57	75	11.4	33.62	4.00	1.32	25.65	235	0.26
129	10.17	34.11E	2.02	2.14	100	10.55	33.92	2.70	1.83	26.04	198	0.31
165	10.08	34.32E	1.44	2.42	150	10.10	34.24	1.68	2.32	26.35	168	0.41
233	9.51	34.46E	0.71	2.72	200	9.84	34.41	0.93	2.60	26.54	151	0.49
304	8.76	34.47E	0.48	2.88	250	9.33	34.47	0.66	2.77	26.67	138	0.56
374	7.65	34.42E	0.52	2.94	300	8.82	34.47	0.50	2.87	26.75	131	0.63
446	6.74	34.36E	0.43	3.03	400	7.30	34.39	0.51	2.97	26.92	115	0.76
596	5.56	34.44E	0.33	3.20	500	6.27	34.38	0.36	3.11	27.05	102	0.87
760	4.91	34.55E	0.48	-	600	5.54	34.44	0.33	(3.20)	27.19	88	0.97
946	4.18	34.61E	0.51	3.23	700	5.11	34.51	0.43	(3.22)	27.29	79	1.06
					800	4.75	34.57	0.50	(3.23)	27.39	70	1.14
					1000	(3.97)	(34.62)			(27.51)	(58)	(1.28)

120.90 CREST; September 1, 1951; 1534 GCT; 26°11'N, 118°38'W; sounding, 2250 fm; wind, 340°, force 4; weather, cloudy; sea, moderate; wire angle, 20°.

0	-	33.58E	5.04	0.46	0	20.6	33.58	5.04	0.46	23.54	435	0.00
9	20.54	33.48	5.35	0.43	10	20.5	33.48	5.36	0.43	23.50	440	0.04
23	-	33.68E	5.44	0.45	20	20.5	33.56	5.43	0.44	23.56	434	0.09
46	-	33.40E	4.93	-	30	19.9	33.61	5.41	(0.46)	23.75	416	0.13
68	-	33.52E	4.96	-	50	16.6	33.41	4.93	(0.46)	24.41	353	0.21
91	13.10	33.56E	4.86	0.71	75	14.9	33.53	4.95	(0.54)	24.88	308	0.29
140	10.16	33.73E	3.89	1.54	100	12.10	33.58	4.74	0.89	25.49	250	0.36
184	9.73	34.18E	2.31	-	150	10.04	33.81	3.50		26.03	199	0.47
272	9.84	34.57E	0.63	-	200	9.71	34.31	1.92		26.48	156	0.57
364	8.80	34.54E	0.32	-	250	9.84	34.54	0.95		26.64	141	0.64
451	7.64	34.49E	0.61	3.08	300	9.66	34.57	0.46		26.69	136	0.71
543	6.74	34.48E	0.39	-	400	8.29	34.52	0.41		26.88	119	0.85
725	5.35	34.66uE	0.28	3.30	500	7.14	34.48	0.49		27.01	106	0.96
908	4.50	34.57E	0.46	3.34	600	6.26	34.49	0.33		27.14	94	1.07
1105	3.75	34.60E	0.62	3.26	700	5.51	34.51	0.28		27.25	83	1.16
					800	4.98	34.54	0.31	3.33	27.34	75	1.24
					1000	4.16	34.59	0.57	3.32	27.47	62	1.40

123.37 CREST; September 12, 1951; 0717 GCT; 27°24'N, 114°40'W; sounding, 40 fm; wind, 340°, force 5; weather, clear; sea, very rough; wire angle, 02°.

0	-	34.84E	3.82	0.81	0	24.0	34.84	3.82	0.81	23.54	436	0.00
10	23.95	34.80	3.96	0.80	10	23.94	34.80	3.96	0.80	23.52	437	0.04
25	21.30	34.59E	3.32	1.21	20	22.00	34.64	3.57	1.09	23.97	395	0.09
40	20.20	-	2.73	1.50	30	21.00	34.57	3.09	1.31	24.18	374	0.12
55	16.66	34.04E	3.75	1.20u	50	17.90	34.23			24.73	323	0.19

123.40 CREST; September 12, 1951; 0554 GCT; 27°19.5'N, 114°49'W; sounding, 62 fm; wind, 340°, force 4; weather, clear; sea, very rough; wire angle, 10°.

0	24.24	34.55E	4.22	0.59	0	24.24	34.55	4.22	0.59	23.25	464	0.00
10	24.24	34.47	4.07	0.57	10	24.24	34.47	4.07	0.57	23.19	469	0.05
24	19.42	34.15E	4.30	0.90	20	24.23	34.46	4.28	0.79	23.20	468	0.09
49	17.93	34.46E	2.52	1.70	30	19.01	34.16	4.00	1.09	24.40	354	0.13
73	15.64	34.45E	1.97	2.04	50	17.92	34.46	2.52	1.74	24.90	306	0.20
97	14.30	34.42E	1.65	-	75	15.57	34.45	1.94	(2.04)	25.45	254	0.27
					100	(14.21)	(34.42)	(1.63)		(25.72)	(228)	(0.33)

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^{-5}cm^3/g$	dyn m	

CREST; September 11, 1951; 2109 GCT; 26°55.5'N, 114°06'W; sounding, 45 fm; wind, 270°, force 3; weather, clear; sea, rough; wire angle, 13°. 127.34

0	25.77	34.79E	3.86	0.57	0	25.77	34.79	3.86	0.57	22.97	491	0.00	
10	25.70	34.78	3.92	-	10	25.70	34.78	3.92	0.58	22.98	489	0.05	
24	24.24	34.73E	4.09	0.64	20	25.62	34.77	4.07	0.61	23.00	487	0.10	
48	20.04	34.57E	2.93	1.34	30	23.22	34.69	4.07	0.72	23.66	425	0.14	
73	16.09	34.52E	1.54	2.16	50	19.62	34.56	2.78	1.52	24.55	339	0.22	
					75	(16.00)	(34.52)	(1.50)	(2.19)	(25.40)	(258)	(0.29)	

CREST; September 12, 1951; 0005 GCT; 26°44'N, 114°29'W; sounding, 1610 fm; wind, 340°, force 5; weather, clear; sea, very rough; wire angle, 15°. 127.40

0	-	34.26E	4.39	0.58	0	23.9	34.26	4.39	0.58	23.13	475	0.00	
9	23.92	34.18	4.35	0.56	10	23.9	34.18	4.36	(0.56)	23.07	480	0.05	
24	-	34.02E	4.77	-	20	22.8	34.04	4.70	(0.62)	23.28	460	0.09	
48	-	33.96E	3.84	1.24	30	20.4	34.01	4.75	(0.86)	23.92	399	0.14	
72	-	33.76E	3.58	1.34	50	14.9	33.95	3.82	1.26	25.20	277	0.21	
97	11.32	33.89E	2.67	1.79	75	12.3	33.76	3.54	1.42	25.59	241	0.27	
149	11.10	34.40E	1.25	2.50	100	11.17	33.91	2.53	1.82	25.92	209	0.33	
195	11.43	34.61E	0.44	2.70	150	11.10	34.40	1.24	2.50	26.31	172	0.42	
289	10.43	34.65E	0.25	2.88	200	11.42	34.61	0.40	2.71	26.42	162	0.51	
386	8.88	34.57E	0.23	-	250	10.96	34.65	0.25	2.79	26.53	151	0.59	
477	7.74	34.58E	0.29	3.10	300	10.28	34.64	0.23	2.90	26.65	140	0.67	
576	6.61	34.56E	0.25	3.17	400	8.69	34.57	0.23	3.04	26.85	121	0.80	
765	5.17	34.45uE	0.30	3.27	500	7.47	34.58	0.27	3.11	27.05	103	0.92	
950	4.1 a)	34.57E	0.49	3.28	600	6.39	34.56	0.25	3.19	27.18	89	1.02	
1148	3.67	34.60E	0.65	-	700	5.61	34.56	0.28	3.25	27.28	81	1.11	
					800	4.94	34.56	0.33	3.28	27.36	73	1.19	
					1000	3.97	34.58	0.53	(3.26)	27.48	61	1.34	

CREST; September 3, 1951; 0838 GCT; 26°29'N, 113°29'W; sounding, 44 fm; wind, 040°, force 3; weather, clear; sea, rough; wire angle, 03°. 130.30

0	24.94	34.22E	4.61	-	0	24.94	34.22	4.61		22.79	507	0.00	
10	24.93	34.18	4.53	0.46	10	24.93	34.18	4.53	0.46	22.77	509	0.05	
25	24.94	34.34E	4.39	0.48	20	24.93	34.25	4.45	0.46	22.82	505	0.10	
50	-	34.68E	2.73	1.54	30	24.94	34.42	4.28	0.51	22.94	493	0.15	
75	18.55	34.70E	1.90	2.05	50	20.47	34.68	2.73	1.54	24.41	353	0.24	
					75	18.55	34.70	1.90	2.05	24.92	304	0.32	

CREST; September 3, 1951; 0540 GCT; 26°20.5'N, 113°46'W; sounding, 90 fm; wind, 330°, force 6; weather, clear; sea, very rough; wire angle, 20°. 130.35

0	-	34.57E	4.53	0.63	0	24.8	34.57	4.53	0.63	23.09	478	0.00	
9	24.79	34.52	4.39	-	10	24.78	34.52	4.40	0.64	23.07	481	0.05	
19	20.06	34.19E	4.85	0.75	20	19.98	34.21	4.84	1.27	24.18	374	0.09	
28	-	34.64E	2.81	1.63	30	19.21	34.64	2.62	1.67	24.72	324	0.13	
38	19.10	34.64E	2.30	1.77	50	18.20	34.62	1.89	2.01	24.95	302	0.19	
47	18.22	34.57E	1.97	1.98	75	16.61	34.62	1.40	2.18	25.34	265	0.26	
56	-	34.70E	1.74	2.11									
66	17.60	34.64E	1.59	2.08									
76	-	-	2.11u	-									
85	15.72	34.58E	1.19	2.30									
95	-	34.70E	0.92	2.51									

a) Temperature inferred from pressure thermometer and wire depth.

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m
130.40	CREST; September 3, 1951; 0219 GCT; 26°09'N, 114°07.5'W; sounding, 1200 fm; wind, 330°, force 6; weather, clear; sea, high; wire angle, 30°.											
0	-	34.04E	4.75	0.58	0	23.4	34.04	4.75	0.58	23.11	477	0.00
8	23.32	34.01	4.75	-	10	23.3	34.00	4.82	0.60	23.12	476	0.05
26	-	33.50E	5.66	0.61	20	19.4	33.66	5.57	0.61	23.92	400	0.09
52	-	33.79E	3.92	1.42	30	15.1	33.50	5.65	0.62	24.82	314	0.13
78	-	34.11E	2.03	-	50	13.3	33.75	4.10	1.38	25.39	260	0.18
103	12.16	34.63E	0.76	2.64	75	11.9	34.07	2.30	2.08	25.91	210	0.24
154	12.11	34.76E	0.32	-	100	12.1	34.59	0.90	2.59	26.27	176	0.29
205	11.48	34.78E	0.17	-	150	12.14	34.75	0.34		26.38	165	0.38
305	10.20	34.64E	0.22	3.00	200	11.60	34.78	0.18	(2.90)	26.51	153	0.46
402	8.86	34.62E	0.15	3.13	250	10.85	34.70	0.16	(2.94)	26.59	146	0.54
502	7.50	34.57E	0.26	3.21	300	10.26	34.64	0.21	(2.99)	26.65	140	0.61
599	6.42	34.42E	0.24	-	400	8.90	34.62	0.15	3.12	26.86	120	0.74
802	5.16	34.56E	0.25	3.44	500	7.53	34.57	0.25	3.21	27.02	104	0.85
					600	6.42	34.42	0.24	(3.33)	27.06	101	0.97
					700	5.73	34.47	0.25	(3.41)	27.19	89	1.07
					800	5.18	34.56	0.25	(3.44)	27.33	75	1.16
130.50	CREST; September 2, 1951; 2025, 2046 GCT; 25°51'N, 114°45.5'W; sounding, 2000 fm; wind, 330°, force 6; weather, cloudy; sea, very rough; wire angle, 21°, 22°.											
0	-	33.94E	4.72	0.42	0	21.9	33.94	4.72	0.42	23.46	443	0.00
9	21.77	33.86	4.90	0.40	10	21.8	33.86	4.92	0.40	23.42	447	0.04
23	-	34.49E	4.94	0.39	20	21.7	33.79	4.94	0.39	23.40	449	0.09
51	-	33.66E	4.38	1.01	30	21.3	33.74	4.90	0.42	23.48	441	0.13
74	-	33.92E	2.84	1.74	50	13.9	33.66	4.40	1.00	25.19	278	0.21
100	11.00	34.09E	2.23	1.97	75	12.2	33.93	2.83	1.74	25.74	226	0.27
					100	11.00	34.09	2.23	1.97	26.09	193	0.32
148	10.61	34.34E	1.53	2.42	150	10.59	34.34	1.54	2.45	26.36	168	0.41
197	10.15	34.52E	1.74	2.70	200	10.11	(34.52)	1.73	2.70	(26.58)	(147)	(0.49)
294	8.83	-	0.49	2.92	250	9.47	(34.51)	0.86	2.82	(26.68)	(137)	(0.57)
394	7.52	34.46E	0.39	-	300	8.74	(34.49)	0.47	2.93	(26.78)	(127)	(0.64)
491	6.75	34.53E	0.20	3.18	400	7.46	34.46	0.39	3.05	26.95	112	(0.76)
589	5.81	34.42E	0.31	3.27	500	6.67	34.53	0.20	3.18	27.11	96	(0.87)
783	4.90	34.51E	0.40	3.33	600	5.73	34.42	0.33	3.28	27.15	92	(0.97)
982	4.07	34.61E	0.52	3.37	700	5.24	34.47	0.40	3.31	27.25	83	(1.06)
1181	3.50	34.59E	0.78	3.37	800	4.83	34.52	0.40	3.34	27.34	75	(1.15)
					1000	4.01	34.61	0.54	3.37	27.50	60	(1.29)
130.60	CREST; September 2, 1951; 1338 GCT; 25°23'N, 115°25'W; sounding, 2150 fm; wind, 340°, force 5; weather, overcast; sea, very rough; wire angle, 34°.											
0	-	33.99E	4.82	0.32	0	21.9	33.99	4.82	0.32	23.50	440	0.00
8	21.78	34.00	4.72	0.32	10	21.8	34.00	4.74	0.32	23.54	436	0.04
21	-	33.98E	4.89	0.33	20	21.8	33.99	4.87	0.33	23.53	437	0.09
46	-	33.83E	5.27	0.36	30	21.8	33.95	5.04	0.34	23.45	444	0.13
67	-	33.51E	5.53	0.40	50	18.7	33.78	5.34	0.36	24.18	374	0.21
92	15.23	33.64E	5.27	0.53	75	16.3	33.54	5.53	0.43	24.58	337	0.30
134	11.33	33.87E	3.12	1.61	100	13.9	33.67	4.90	0.59	25.20	277	0.38
177	10.93	34.27E	1.51	2.36	150	11.18	34.05	2.25	2.11	26.03	199	0.50
261	10.15	34.48E	0.66	-	200	10.72	34.36	1.16	(2.46)	26.35	169	0.60
345	9.02	34.53E	0.42	2.83	250	10.25	34.47	0.72	(2.64)	26.52	153	0.68
428	8.06	34.51E	0.35	2.96	300	9.67	34.51	0.52	(2.75)	26.64	141	0.76
508	6.90	34.44E	0.34	3.01	400	8.37	34.52	0.36	2.92	26.86	120	0.89
674	5.82	34.46E	0.49	-	500	6.99	34.44	0.34	3.00	27.00	107	1.01
853	4.86	34.56E	0.32	3.24	600	6.24	34.44	0.42	(3.07)	27.10	97	1.12
1042	4.09	34.61E	0.32	3.18	700	5.68	34.47	0.48	(3.16)	27.20	88	1.22
					800	5.15	34.53	0.39	(3.22)	27.31	77	1.31
					1000	4.24	34.60	0.32	3.19	27.46	63	1.46

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m
CREST; September 2, 1951; 0847 GCT; 25°03'N, 116°13'W; sounding, 2200 fm; wind, 340°, force 5; weather, cloudy; sea, rough; wire angle, 17°.												130.70
0	-	34.04E	4.87	-	0	20.9	34.04	4.87		23.81	410	0.00
10	20.92	33.95	4.99	-	10	20.92	33.95	4.99		23.73	418	0.04
24	-	34.08E	4.81	0.50	20	20.9	34.04	4.85		23.81	410	0.08
53	-	33.56E	5.50	0.60	30	20.8	34.07	4.80	0.50	23.86	405	0.12
75	-	33.95E	3.28	-	50	16.2	33.57	5.47	0.56	24.62	333	0.20
104	12.68	34.36E	1.54	-	75	12.9	33.96	3.28	(1.54)	25.62	238	0.27
155	11.95	34.74E	0.55	2.72	100	11.8	34.10	1.70	(2.11)	25.95	207	0.32
205	11.31	34.72E	0.29	2.85	150	12.03	34.73	0.60	(2.68)	26.39	164	0.42
308	10.38	34.72E	0.17	-	200	11.37	34.72	0.29	2.83	26.51	153	0.50
414	8.48	34.64E	0.51	2.98	250	10.88	34.72	0.23	(2.89)	26.60	145	0.58
516	7.45	34.53E	0.25	-	300	10.45	34.72	0.17	(2.92)	26.68	137	0.65
617	6.36	34.52E	0.26	-	400	8.70	34.65	0.48	(2.97)	26.91	115	0.78
815	5.12	34.58E	0.28	3.29	500	7.62	34.55	0.26		27.00	107	0.90
1014	4.36	34.62E	0.94u	3.27	600	6.52	34.52	0.25		27.13	94	1.00
1212	3.66	34.60E	0.69	-	700	5.78	34.54	0.26		27.24	84	1.10
					800	5.20	34.58	0.28		27.34	75	1.19
					1000	4.40	34.62	0.40		27.46	63	1.34
CREST; September 4, 1951; 0404 GCT; 26°04.5'N, 112°48'W; sounding, 45 fm; wind, 340°, force 2; weather, clear; sea, slight; wire angle, 00°.												133.25
0	-	35.05E	4.17	-	0	26.4	35.05	4.17		22.97	490	0.00
15	26.38	34.96	4.25	0.66	10	26.39	35.00	4.24		22.93	494	0.05
30	25.85	34.70E	4.27	0.62	20	26.36	34.93	4.26		22.91	496	0.10
45	18.88	33.79E	5.07	-	30	25.85	34.70	4.27	0.62	22.88	499	0.15
60	-	34.49E	3.26	-	50	17.94	34.00	4.48		24.54	340	0.23
70	18.14	34.50E	2.43	-	75	(18.02)	(34.51)			(24.91)	(305)	(0.31)
CREST; September 4, 1951; 0803 GCT; 25°54.5'N, 113°07.5'W; sounding, 92 fm; wind, 240°, force 2; weather, clear, lightning visible; sea, moderate; wire angle, 06°.												133.30
0	25.63	34.75E	4.33	0.56	0	25.63	34.75	4.33	0.56	22.98	489	0.00
9	25.64	34.78	4.45	0.54	10	25.63	34.78	4.46	0.54	23.01	487	0.05
24	25.54	34.68E	4.53	0.51	20	25.59	34.74	4.52	0.51	22.98	489	0.10
49	-	33.83E	4.59	0.62	30	25.31	34.59	4.56	0.52	22.96	491	0.15
73	13.62	34.14E	2.47	1.32	50	19.40	33.83	4.57	0.62	24.05	387	0.23
97	13.24	34.45E	1.70	2.51	75	13.57	34.14	2.40	1.44	25.63	237	0.31
120	13.17	-	0.94	2.98	100	13.22	(34.49)	1.61	2.59	(25.97)	(204)	(0.37)
150	12.94	-	0.34	-	150	12.94		0.34				
CREST; September 4, 1951; 1440 GCT; 25°34'N, 112°18.5'W; sounding, 40 fm; wind, 040°, force 2; weather, overcast; sea, moderate; wire angle, missing.												137.23
0	26.59	34.90E	4.05		0	26.59	34.90	4.05		22.80	507	0.00
10	26.55	34.90	4.18		10	26.55	34.90	4.18		22.80	507	0.05
25	24.80	34.54E	4.36		20	26.51	34.88	4.34		22.81	506	0.10
50	20.02	34.57E	3.14		30	24.40	34.54	4.32		23.19	469	0.15
					50	20.02	34.57	3.14		24.44	350	0.23
CREST; September 4, 1951; 1117 GCT; 25°21'N, 112°43.5'W; sounding, 156 fm; wind, 320°, force 3; weather, clear; sea, moderate; wire angle, 07°.												137.30
0	-	34.61E	4.37	0.61	0	25.6	34.61	4.37	0.61	22.88	498	0.00
10	25.53	34.56	4.41	0.60	10	25.53	34.56	4.41	0.60	22.87	500	0.05
25	23.70	34.20E	4.74	0.60	20	25.51	34.42	4.53	0.59	22.77	509	0.10
49	16.56	33.76E	5.43	0.98	30	22.20	34.10	4.98	0.60	23.50	440	0.15
73	13.10	33.77E	3.79	1.94	50	16.50	33.76	5.42	1.04	24.70	325	0.22
97	14.13	34.60E	1.19	2.40	75	13.10	33.80	3.58	2.00	25.46	253	0.30
147	13.64	34.84E	0.49	2.59	100	14.09	34.64	1.02	2.43	25.91	210	0.36
194	12.15	34.78E	0.29	2.94	150	13.61	34.84	0.49	2.60	26.17	186	0.46
					200	(12.10)	(34.78)	(0.27)	(2.96)	(26.43)	(162)	(0.55)

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m
140.30	CREST; September 4, 1951; 1923 GCT; 24°45.5'N, 112°24'W; sounding, 60 fm; wind, 240°, force 1; weather, partly cloudy; sea, moderate; wire angle, 05°.											
0	-	34.90E	4.37	0.74	0	26.5	34.90	4.37	0.74	22.82	504	0.00
10	26.40	34.87	4.41	-	10	26.40	34.87	4.41	(0.70)	22.83	503	0.05
25	23.30	34.60E	4.16	-	20	24.52	34.75	4.22	(0.73)	23.32	457	0.10
44	17.72	34.12E	4.21	1.04	30	22.90	34.44	4.16	(0.91)	23.56	434	0.14
69	-	33.96E	3.87	2.05u	50	17.08	34.06	4.19	1.09	24.80	316	0.22
88	14.96	34.34E	2.13	1.28	75	15.45	34.00	2.97		25.12	285	0.29
140.35	CREST; September 4, 1951; 2227 GCT; 24°36'N, 112°43'W; sounding, 400 fm; wind, 260°, force 2; weather, partly cloudy; sea, rough; wire angle, 03°.											
0	-	34.85E	4.23	0.51	0	26.6	34.85	4.23	0.51	22.75	511	0.00
10	25.82	34.72	4.36	0.51	10	25.82	34.72	4.36	0.51	22.90	497	0.05
25	-	34.55E	4.49	0.54	20	25.2	34.62	4.45	0.53	23.01	486	0.10
49	-	33.86E	5.17	0.58	30	24.9	34.53	4.53	0.56	23.04	483	0.15
73	-	33.86E	4.36	0.99	50	18.3	33.86	5.16	0.58	24.35	359	0.23
96	13.38	33.99E	2.87	1.68	75	14.1	33.86	4.29	1.02	25.31	267	0.31
147	12.58	34.59E	0.84	2.58	100	13.1	34.02	2.52	1.84	25.64	236	0.38
193	12.31	34.79E	0.42	2.82	150	12.56	34.61	0.79	2.60	26.20	183	0.48
239	11.99	34.81E	0.32	2.86	200	12.27	34.80	0.40	2.83	26.40	164	0.57
286	10.98	34.69E	0.31	2.84	250	11.81	34.79	0.31	2.85	26.48	156	0.65
338	10.23	34.70E	0.19	2.94	300	10.78	34.66	0.28	2.86	26.57	147	0.73
385	9.45	34.57E	0.25	2.92	400	9.22		0.26	2.93			
479	7.79	34.59E	0.29	3.07	500	7.47		0.27	3.10			
581	6.35	34.56E	0.22	3.24	600	6.16						
679	5.68	34.50E	0.20	3.18								
140.40	CREST; September 5, 1951; 0211 GCT; 24°27'N, 113°00'W; sounding, 1860 fm; wind, 340°, force 2; weather, clear; sea, moderate; wire angle, 00°.											
0	-	33.96E	4.73	0.48	0	23.6	33.96	4.73	0.48	22.96	491	0.00
10	23.59	33.91	4.67	0.52	10	23.59	33.91	4.67	0.52	22.91	496	0.05
25	-	33.87E	4.66	0.48	20	23.5	33.89	4.66	0.51	22.98	490	0.10
50	-	33.54E	5.47	0.52	30	23.3	33.83	4.70	0.48	22.98	489	0.15
75	-	33.63E	4.81	0.92	50	17.6	33.54	5.47	0.52	24.27	366	0.24
99	12.89	34.04E	2.67	1.82	75	13.4	33.63	4.81	0.92	25.27	271	0.32
152	11.80	34.47E	0.93	2.52	100	12.88	34.05	2.63	1.83	25.70	230	0.39
200	11.34	34.64E	0.55	2.72	150	11.84	34.46	0.98	2.50	26.21	181	0.49
293	10.31	34.60E	0.32	2.90	200	11.34	34.64	0.55	2.72	26.45	159	0.58
391	9.12	34.58E	0.28	3.00	250	10.84	34.62	0.38	2.85	26.53	151	0.66
484	7.92	34.44E	0.28	3.07	300	10.22	34.59	0.31	2.90	26.61	143	0.73
582	6.91	34.49E	0.34	-	400	9.02	34.58	0.28	3.00	26.81	125	0.87
776	5.27	34.58E	0.35	3.25	500	7.74	34.44	0.30	(3.09)	26.89	117	1.00
966	4.22	34.56E	0.64	3.20	600	6.75	34.49	0.34	(3.18)	27.08	99	1.11
1168	3.66	34.52E	0.69	3.28	700	5.84	34.55	0.35	(3.22)	27.24	84	1.21
					800	5.12	34.58	0.36	3.23	27.35	73	1.30
					1000	4.11	34.55	0.67	3.20	27.44	65	1.45
140.50	CREST; September 5, 1951; 0755 GCT; 24°05'N, 113°40'W; sounding, 1650 fm; wind, 320°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.											
0	-	33.92E	4.80	0.54	0	22.3	33.92	4.80		23.33	455	0.00
10	22.19	33.83	4.89	-	10	22.19	33.83	4.89		23.30	459	0.05
25	-	33.94E	4.93	-	20	22.1	33.92	4.92		23.39	450	0.09
49	-	33.76E	5.29	0.88	30	21.8	33.93	4.93		23.48	441	0.14
73	-	33.68E	5.17	-	50	18.2	33.76	5.29		24.30	364	0.22
97	12.22	33.80E	3.65	-	75	14.4	33.68	5.00		25.11	287	0.30
149	12.60	34.69E	0.42	-	100	11.9	33.86	3.40		25.75	225	0.36
195	12.00	34.80E	0.17	-	150	12.60	34.69	0.42		26.25	178	0.47
283	10.83	34.78E	0.26	2.79	200	11.92	34.80	0.17		26.47	157	0.55
376	9.20	34.63E	0.21	2.93	250	11.25	34.80	0.21		26.60	145	0.63
465	8.17	34.61E	0.22	-	300	10.61	34.76	0.26	2.83	26.68	137	0.70
561	6.96	34.53E	0.17	3.08	400	8.89	34.62	0.21	2.94	26.86	120	0.84
749	5.66	34.53E	0.24	3.28	500	7.73	34.58	0.20	3.04	27.00	106	0.95
936	4.66	34.57E	0.37	3.32	600	6.65	34.53	0.19	3.10	27.12	95	1.06
1140	3.87	34.56E	0.57	-	700	5.96	34.53	0.22	3.20	27.21	87	1.16
					800	5.35	34.54	0.28	3.31	27.29	79	1.25
					1000	4.37	34.57	0.44		27.43	66	1.41

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

CREST; September 5, 1951; 1400 GCT; 23°45'N, 114°17'W; sounding, 1980 fm; wind, 340°, force 2; weather, overcast; sea, moderate; wire angle, 07°. 140.60

0	-	33.94E	5.00	0.48	0	21.7	33.94	5.00	0.48	23.51	438	0.00
10	21.90	33.82	5.01	0.48	10	21.90	33.82	5.01	0.48	23.37	452	0.04
25	-	34.52uE	5.05	-	20	21.8	34.00	5.02	(0.48)	23.54	436	0.09
49	-	33.76E	5.50	-	30	21.7	34.00	5.07	(0.48)	23.57	433	0.13
73	-	33.63E	5.57	0.65	50	18.3	33.76	5.51	(0.48)	24.27	366	0.21
97	14.01	34.05E	3.24	1.60	75	14.7	33.63	5.56	0.70	25.00	296	0.29
148	12.52	34.59E	0.85	2.67	100	14.10	34.11	3.07	1.74	25.50	249	0.36
194	10.49	34.43E	1.35	2.55	150	12.48	34.59	0.86	2.67	26.19	183	0.47
286	9.47	34.63E	0.52	2.90	200	10.40	34.43	1.34	2.56	26.46	158	0.56
383	8.40	34.55E	0.29	-	250	9.80	34.55	0.91	2.75	26.66	139	0.64
475	7.40	34.62E	0.25	3.20	300	9.35	34.62	0.45	2.94	26.78	127	0.71
573	6.94	34.59E	0.15	3.28	400	8.20	34.56	0.29	3.09	26.92	114	0.83
764	5.43	34.55E	0.22	3.36	500	7.27	34.61	0.22	3.23	27.10	98	0.94
955	4.55	34.58E	0.37	3.40	600	6.74	34.58	0.15	3.30	27.15	93	1.04
1157	3.86	34.64E	0.57	-	700	5.90	34.56	0.17	3.34	27.24	84	1.14
					800	5.23	34.55	0.24	3.36	27.31	77	1.23
					1000	4.39	34.59	0.42	(3.40)	27.44	65	1.38

CREST; September 5, 1951; 1916 GCT; 23°27'N, 114°58'W; sounding, 2100 fm; wind, 360°, force 2; weather, overcast; sea, moderate; wire angle, 11°. 140.70

0	-	33.86E	4.75	0.62	0	22.9	33.86	4.75	0.62	23.12	476	0.00
10	22.89	33.80	4.43	0.55	10	22.89	33.80	4.43	0.55	23.08	479	0.05
25	-	33.82E	4.84	0.58	20	22.2	33.81	4.48	0.56	23.28	461	0.09
49	-	33.82E	5.48	0.68	30	19.9	33.82	5.21	0.60	23.91	400	0.14
73	-	33.68E	5.21	0.68	50	17.6	33.82	5.45	0.68	24.49	345	0.21
97	13.93	34.11E	3.22	-	75	15.2	33.68	5.15	(0.70)	24.93	303	0.29
149	12.27	34.60E	0.77	-	100	13.91	34.18	2.95	(1.94)	25.59	240	0.36
195	11.50	34.68E	0.46	2.98	150	12.27	34.60	0.77	(2.70)	26.24	179	0.47
287	9.81	34.60E	0.49	2.90	200	11.42	34.68	0.44	2.98	26.46	157	0.55
383	8.64	34.54E	0.25	3.06	250	10.50	34.63	0.48	2.86	26.60	145	0.63
475	7.39	34.53E	0.18	3.20	300	9.64	34.59	0.47	2.92	26.71	134	0.71
571	6.57	34.52E	0.21	3.27	400	8.42	34.54	0.23	3.09	26.87	119	0.84
762	5.26	34.56E	0.26	3.37	500	7.15	34.53	0.19	3.22	27.05	102	0.95
951	4.44	34.55E	0.43	3.38	600	6.35	34.52	0.22	3.29	27.15	93	1.06
1152	3.84	34.59E	0.59	3.32	700	5.63	34.55	0.24	3.35	27.26	82	1.15
					800	5.07	34.56	0.28	3.38	27.34	75	1.23
					1000	4.28	34.55	0.50	3.38	27.42	67	1.39

CREST; September 10, 1951; 0500 GCT; 24°11.5'N, 112°03'W; sounding, 100 fm; wind, 350°, force 2; weather, clear; sea, moderate; wire angle, 10°. 143.30

0	-	34.90E	4.21	0.52	0	27.2	34.90	4.21	0.52	22.60	526	0.00
10	26.96	-	4.22	0.55	10	26.96	34.90	4.22	0.55	22.67	518	0.05
24	26.55	34.92E	4.27	0.52	20	26.62	34.91	4.24	0.52	22.79	507	0.10
49	19.84	34.27E	4.65	0.74	30	26.42	34.92	4.33	0.53	22.86	500	0.15
73	18.08	34.38E	3.59	1.28	50	19.61	34.27	4.65	0.74	24.33	361	0.24
97	15.64	34.43E	2.01u	2.03	75	17.98	34.38	3.57	1.35	24.82	314	0.32
120	14.64	34.84E	2.76	2.74	100	14.30	34.45	3.07	2.12	25.72	228	0.39
150	14.15	35.10E	1.60	2.80	150	14.15	35.10	1.60	2.80	26.25	178	0.50

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m

143.35 CREST; September 10, 1951; 0155 GCT; 24°01.5'N, 112°22.5'W; sounding, 1400 fm; wind, 300°, force 3; weather, clear; sea, moderate; wire angle, 04°.

0	-	-	3.99		0	27.8	(34.80)	3.99		(22.33)	(551)	(0.00)
10	27.98	34.80	3.96		10	27.98	34.80	3.96		22.27	557	0.06
25	-	34.73E	4.23		20	26.4	34.78	4.18		22.76	510	0.11
50	-	34.34E	4.06		30	25.4	34.68	4.23		23.00	487	0.16
74	-	34.49E	1.20		50	20.8	34.34	4.06		24.06	386	0.25
99	14.44	34.70E	0.52		75	15.9	34.49	1.20		25.40	259	0.33
152	13.60	34.88E	0.64		100	14.43	34.70	0.52		25.88	213	0.39
199	12.52	34.88E	0.23		150	13.64	34.87	0.65		26.18	184	0.49
292	10.66	34.68E	0.29		200	12.51	34.88	0.23		26.42	162	0.58
390	9.34	34.63E	0.12		250	11.45	34.78	0.27		26.54	150	0.66
483	7.60	34.54E	0.25		300	10.55	34.67	0.28		26.62	143	0.73
581	6.58	34.43E	0.20		400	9.20	34.62	0.12		26.81	125	0.87
773	5.06	34.65uE	0.29		500	7.42	34.52	0.25		27.00	107	0.99
964	4.16	34.56E	0.47		600	6.40	(34.43)	0.20		(27.07)	(100)	(1.10)
1165	3.58	34.67E	0.63		700	5.60	(34.45)	0.24		(27.19)	(89)	(1.20)
					800	4.89	(34.49)	0.32		(27.31)	(78)	(1.29)
					1000	4.06	(34.58)	0.52		(27.46)	(63)	(1.45)

147.20 CREST; September 9, 1951; 1445 GCT; 23°56'N, 111°04'W; sounding, 80 fm; wind, 310°, force 3; weather, clear; sea, moderate; wire angle, 00°.

0	-	-	3.95	0.63	0	27.5	(34.61)	3.95	0.63	(22.28)	(556)	(0.00)
10	27.58	34.61	3.99	0.60	10	27.58	34.61	3.99	0.60	22.26	558	0.06
15	26.74	34.62E	4.12	0.60	20	26.38	34.61	4.21	0.60	22.64	521	0.11
34	25.17	34.39E	4.25	0.59	30	25.80	34.49	4.25	0.59	22.73	513	0.16
58	19.37	-	3.24	-	50	21.20	34.43	3.75	0.86	24.02	389	0.25
76	16.92	34.57E	1.86	2.00	75	16.93	34.57	1.88	2.00	25.22	276	0.33
94	16.36	34.64E	1.31	2.30	100	(16.28)	(34.65)	(1.20)	(2.36)	(25.43)	(256)	(0.40)

147.25 CREST; September 9, 1951; 1747 GCT; 23°47'N, 111°23'W; sounding, 250 fm; wind, 340°, force 2; weather, clear; sea, moderate; wire angle, 00°.

0	-	35.00E	4.03	-	0	27.8	35.00	4.03		22.48	537	0.00
10	27.58	34.88	4.06	-	10	27.58	34.88	4.06		22.45	540	0.05
24	-	34.66E	4.33	0.65	20	26.7	34.73	4.31		22.63	523	0.11
49	-	34.50E	2.80	1.48	30	24.3	34.60	4.30	0.94	23.29	461	0.16
74	-	34.60E	1.28	2.29	50	18.9	34.50	2.62	1.54	24.69	327	0.23
98	14.68	34.79E	0.67	2.64	75	16.1	34.60	1.27	2.30	25.44	255	0.31
151	13.51	34.78E	0.54	2.82	100	14.62	34.79	0.65	2.66	25.91	210	0.37
199	12.33	34.70E	0.33	2.87	150	13.52	34.78	0.54	2.82	26.14	189	0.47
245	11.93	34.84E	0.25	2.88	200	12.33	34.70	0.33	2.87	26.31	172	0.56
292	10.88	34.78E	0.15	2.94	250	11.89	34.84	0.24	2.89	26.51	153	0.64
342	10.05	34.71E	0.17	3.02	300	10.71	34.77	0.15	2.94	26.67	138	0.72
390	9.69	34.70E	0.21	2.97	400	(9.64)	(34.70)	(0.22)	(2.95)	(26.80)	(126)	(0.86)

147.30 CREST; September 9, 1951; 2002 GCT;[a] 23°36'N, 111°41.5'W; sounding, 300 fm; wind, 310°, force 2; weather, clear; sea, moderate; wire angle, 00°.

0	28.42
10	27.60
20	26.76
30	24.72
40	21.95
50	20.43
89	15.16
108	14.30
123	13.40
130	13.14

a) Bathythermograph calibration cast.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	m	°C	‰	ml/L	µg at/L	g/L	$10^{-5}cm^3/g$	dyn m

CREST; September 9, 1951; 2048 GCT; 23°36'N, 111°41.5'W; sounding, 300 fm; wind, 310°, force 2; weather, clear; sea, moderate; wire angle, 00°. 147.30

0	-	34.95E	4.11	-	0	28.3	34.95	4.11		22.28	556	0.00
10	27.63	34.82	4.29	-	10	27.63	34.82	4.29		22.40	545	0.06
25	-	34.47E	4.51	-	20	27.4	34.78	4.49		22.44	540	0.11
50	-	34.60E	3.60	1.07	30	25.0	34.48	4.49		22.97	490	0.16
74	16.20	34.36E	2.64	1.63	50	20.3	34.60	3.60	1.07	24.39	354	0.25
98	14.69	34.82E	0.72	2.48	75	16.18	34.36	2.63	1.64	25.24	274	0.32
150	12.92	34.64E	0.42	2.77	100	14.61	34.82	0.69	2.52	25.94	208	0.39
196	12.36	34.85E	0.56	-	150	12.92	34.64	0.42	2.77	26.15	187	0.49
243	11.68	34.83E	0.23	2.79	200	12.30	34.85	0.56	2.80	26.44	160	0.57
290	11.07	34.80E	0.16	-	250	11.60	34.83	0.22	2.80	26.55	149	0.65
341	10.05	34.68E	0.18	2.87	300	10.91	34.78	0.17	2.84	26.64	141	0.73
387	9.47	34.63E	0.20	2.92	400	9.30	34.63			26.80	125	0.87
435	8.86	34.63E	-	-	500	(8.26)	(34.69)			(27.01)	(106)	(0.99)
484	8.39	34.67E	-	-								

CREST; September 8, 1951; 0727 GCT; 23°24'N, 110°39'W; sounding, 100 fm; wind, 240°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°. 150.19

0	27.90	34.58E	3.89	0.52	0	27.90	34.58	3.89	0.52	22.13	570	0.00
10	27.17	34.54	3.86	0.53	10	27.17	34.54	3.86	0.53	22.34	550	0.06
25	26.91	34.59E	4.11	-	20	26.98	34.58	3.93	0.53	22.43	542	0.11
49	19.10	34.15E	4.35	0.74	30	26.87	34.59	4.23	0.54	22.46	539	0.16
73	15.54	34.27E	2.36	-	50	18.80	34.15	4.33	0.90	24.44	350	0.25
97	14.08	34.47E	1.17	2.35	75	15.20	34.28	2.19	1.82	25.39	259	0.33
120	13.71	34.64E	0.52	2.64	100	14.00	34.49	1.06	2.42	25.81	219	0.39
147	13.40	34.71E	0.31	-	150	(13.38)	(34.72)	(0.29)		(26.12)	(190)	(0.50)

CREST; September 8, 1951; 0357 GCT; 23°12'N, 111°02'W; sounding, 870 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 05°. 150.25

0	-	34.64E	4.00	0.58	0	27.4	34.64	4.00	0.58	22.34	550	0.00
10	26.84	34.56	4.18	-	10	26.84	34.56	4.18	0.57	22.45	540	0.05
25	-	34.66E	4.30	0.62	20	26.6	34.64	4.28	0.59	22.60	526	0.11
50	-	34.18E	3.93	1.07	30	25.0	34.62	4.29	0.66	23.08	480	0.16
74	-	33.94E	3.03	1.49	50	18.7	34.18	3.93	1.07	24.49	345	0.24
98	12.46	34.26E	1.62	-	75	13.4	33.94	3.00	(1.49)	25.51	248	0.31
151	12.03	34.66E	0.56	-	100	12.4	34.27	1.55	(2.31)	25.97	205	0.37
198	11.50	34.75E	0.32	2.85	150	12.04	34.65	0.59		26.33	170	0.47
292	10.31	34.71E	0.25	-	200	11.48	34.75	0.31	(2.86)	26.51	153	0.55
390	9.56	34.65E	0.17	3.01	250	10.82	34.73	0.25	(2.95)	26.62	143	0.63
485	8.22	34.57E	0.22	3.16	300	10.24	34.70	0.23	(3.00)	26.70	135	0.70
583	6.78	34.51E	0.24	3.21	400	9.48	34.64	0.17	3.02	26.78	128	0.84
776	5.27	34.56E	0.37	3.32	500	7.99	34.56	0.23	3.17	26.95	111	0.96
965	4.28	34.60E	0.48	3.30	600	6.61	34.51	0.24	3.21	27.11	96	1.07
1167	3.68	34.64E	0.63	3.32	700	5.80	34.54	0.30	3.26	27.24	84	1.17
					800	5.13	34.57	0.38	3.31	27.34	74	1.25
					1000	4.16	34.61	0.51	3.29	27.49	61	1.40

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m

150.30 CREST; September 8, 1951; 0100 GCT; 23°01'N, 111°19'W; sounding, 1670 fm; wind, 040°, force 1; weather, partly cloudy; sea, moderate; wire angle, 08°.

0	-	34.58E	3.86	0.53	0	26.5	34.58	3.86	0.53	22.59	527	0.00
10	26.12	34.52	-	0.54	10	26.12	34.52	4.12	0.54	22.66	520	0.05
25	-	34.81E	4.20	0.63	20	25.5	34.74	4.19	0.58	23.02	485	0.10
49	-	34.02E	3.29	1.25	30	23.9	34.73	4.15	0.71	23.49	441	0.15
73	-	-	0.97	2.33	50	15.4	34.02	3.08	1.28	25.15	283	0.22
98	13.79	34.77E	0.33	-	75	14.3	34.43	0.90	2.39	25.71	230	0.29
149	12.85	34.96E	0.56	2.84	100	13.7	34.78	0.34	2.69	26.10	192	0.34
195	12.12	34.82E	0.27	-	150	12.85	34.96	0.55	(2.84)	26.41	163	0.43
288	10.65	34.72E	0.17	2.86	200	12.04	34.81	0.25	(2.85)	26.45	159	0.51
385	9.05	34.63E	0.13	3.08	250	11.24	34.76	0.17	(2.85)	26.57	148	0.59
477	7.79	34.60E	0.13	3.17	300	10.46	34.71	0.17	2.88	26.67	138	0.67
574	6.60	34.58E	0.16	3.21	400	8.82	34.62	0.13	3.09	26.87	119	0.80
764	5.12	34.58E	0.23	3.27	500	7.50	34.59	0.13	3.18	27.05	102	0.91
953	4.19	34.58E	0.43	3.31	600	6.36	34.58	0.16	3.21	27.20	88	1.01
1155	3.70	34.62E	0.56	-	700	5.56	34.58	0.20	3.24	27.30	78	1.10
					800	4.91	34.58	0.27	3.28	27.37	71	1.19
					1000	4.04	34.59	0.49	(3.30)	27.47	62	1.33

150.40 CREST; September 7, 1951; 1910 GCT; 22°35'N, 111°58.5'W; sounding, 1850 fm; wind, 040°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.

0	-	34.21E	4.15	0.44	0	25.1	34.21	4.15	0.44	22.73	513	0.00
10	24.62	34.22	4.15	-	10	24.62	34.22	4.15	0.40	22.89	498	0.05
24	-	33.96E	4.54	0.45	20	24.0	34.10	4.50	0.41	22.98	489	0.10
49	-	33.99E	4.25	0.81	30	21.0	33.96	4.52	0.52	23.72	418	0.15
73	-	34.08E	3.22	1.38	50	17.1	33.99	4.21	0.82	24.74	321	0.22
98	13.32	34.38E	1.71	2.18	75	14.3	34.09	3.10	1.44	25.44	255	0.29
150	12.76	34.88E	0.52	2.84	100	13.29	34.42	1.55	2.28	25.91	211	0.35
197	11.84	34.75E	0.35	2.91	150	12.76	34.88	0.52	2.84	26.37	167	0.45
288	10.47	34.82E	0.23	-	200	11.78	34.75	0.33	(2.91)	26.46	158	0.53
386	9.26	34.64E	0.21	3.10	250	11.00	34.76	0.29	(2.94)	26.60	144	0.61
476	7.94	34.56E	0.13	3.18	300	10.30	34.80	0.23	(3.01)	26.76	129	0.68
572	6.83	34.52E	0.17	-	400	9.09	34.63	0.20	3.12	26.84	122	0.81
763	5.37	34.54E	0.33	3.38	500	7.65	34.54	0.13	(3.20)	26.98	108	0.93
954	4.44	34.64E	0.43	3.41	600	6.59	34.52	0.20	(3.30)	27.12	95	1.04
1155	3.70	-	0.59	-	700	5.80	34.53	0.29	(3.36)	27.23	85	1.13
					800	5.17	34.55	0.35	3.39	27.32	76	1.22
					1000	4.28		0.46	(3.41)			

150.50 CREST; September 7, 1951; 1501 GCT; 22°17'N, 112°33'W; sounding, 1950 fm; wind, 350°, force 2; weather, cloudy; sea, moderate; wire angle, 10°.

0	-	34.14E	4.11	-	0	24.3	34.14	4.11		22.93	495	0.00
10	24.11	34.09	4.23	-	10	24.11	34.09	4.23		22.94	493	0.05
24	-	34.13E	4.13	0.61	20	23.5	34.11	4.20		23.13	474	0.10
49	-	33.81E	3.84	0.92	30	21.6	34.12	4.02	0.66	23.68	423	0.14
73	-	34.36E	1.85	2.16	50	15.1	33.81	3.83	1.07	25.05	292	0.21
97	14.20	34.95E	0.65	2.84	75	14.1	34.37	1.40	2.20	25.70	231	0.28
147	13.13	35.06uE	0.43	2.96	100	14.15	34.98	0.61	2.86	26.16	186	0.33
192	12.60	34.87E	0.43	-	150	13.08	34.91	0.43	(2.96)	26.33	171	0.42
284	11.54	34.77E	0.17	2.96	200	12.52	34.85	0.43	(2.96)	26.40	164	0.51
380	10.04	34.64E	0.12	3.18	250	11.96	34.80	0.25	(2.96)	26.46	158	0.59
470	8.35	34.58E	0.10	-	300	11.31	34.75	0.15	2.97	26.55	150	0.67
566	7.26	34.58E	-	3.25	400	9.70	34.62	0.11	3.20	26.73	133	0.82
753	5.57	34.64E	0.20	3.34	500	7.99	34.58	(0.10)	3.24	26.97	110	0.94
937	4.54	34.51E	0.31	3.47	600	6.91		(0.12)	3.25			
1137	4.00	34.57E	0.43	3.37	700	5.98		(0.18)	3.29			
					800	5.27		0.22	3.39			
					1000	4.34		0.34	3.45			

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T $10^{-5}cm^3/g$	ΔD dyn m
CREST; September 7, 1951; 0935 GCT; 21°59'N, 113°09'W; sounding, 2000 fm; wind, 350°, force 4; weather, partly cloudy; sea, moderate; wire angle, 00°.												150.60
0	-	34.47E	4.47	0.62	0	26.0	34.47	4.47	0.62	22.65	520	0.00
10	26.00	34.43	4.48	0.63	10	26.00	34.43	4.48	0.63	22.61	524	0.05
25	-	34.39E	4.57	0.64	20	26.0	34.42	4.52	0.64	22.61	524	0.10
50	-	33.65E	5.56	0.56	30	22.8	34.34	4.66	0.62	23.51	439	0.15
75	-	34.23E	2.41	1.90	50	16.1	33.65	5.56	0.56	24.71	324	0.23
99	12.98	34.44E	1.26	2.47	75	14.3	34.23	2.41	1.90	25.55	244	0.30
153	12.52	34.82E	0.29	-	100	12.97	34.45	1.24	(2.48)	26.00	202	0.36
201	11.66	34.78E	0.23	-	150	12.55	34.81	0.30	(2.86)	26.36	168	0.45
294	10.17	34.65E	0.19	2.96	200	11.69	34.78	0.23	(2.94)	26.50	155	0.53
391	8.75	34.62E	0.19	-	250	10.84	34.70	0.21	(2.96)	26.59	146	0.61
486	7.46	34.56E	0.29	3.19	300	10.08	34.65	0.19	2.96	26.69	137	0.68
583	6.50	34.50E	0.29	3.33	400	8.63	34.62	0.20	3.06	26.90	116	0.82
775	5.30	34.55E	0.27	3.38	500	7.31	34.54	0.29	3.21	27.04	103	0.93
966	4.39	34.54E	0.47	3.37	600	6.37	34.50	0.29	3.34	27.13	94	1.04
					700	5.72	34.53	0.27	3.36	27.24	84	1.13
					800	5.17	34.55	0.29	3.38	27.32	76	1.22
					1000	(4.23)	(34.53)	(0.51)	(3.36)	(27.40)	(68)	(1.38)
CREST; September 7, 1951; 0432 GCT; 21°40'N, 113°48'W; sounding, 2050 fm; wind, 320°, force 3; weather, cloudy; sea, moderate; wire angle, 33°.												150.70
0	-	33.95E	4.59	-	0		33.95	4.59				
8	24.32	33.89	4.56	-	10		33.89	4.57				
21	-	33.90E	4.72	-	20		33.90	4.72				
42	-	33.74E	5.21	0.44	30		33.86	4.96				
62	-	33.77E	5.53	-	50		33.75	5.39				
82	14.36	33.53E	5.06	-	75		33.60	5.30				
124	12.20	34.10E	2.00	-	100	13.35	33.87	4.16		25.47	252	
160	10.86	34.25E	1.59	2.40	150	11.20	34.21	1.71		26.15	188	
235	10.29	34.53E	0.62	-	200	10.52	34.41	0.98		26.43	161	
313	9.56	34.56E	0.26	-	250	10.18	34.54	0.53		26.58	147	
389	8.48	34.65uE	0.17	-	300	9.69	34.56	0.30		26.68	137	
467	7.58	34.51E	0.19	-	400	8.35	34.54	0.17		26.88	118	
628	6.07	34.47E	0.17	3.32	500	7.24	34.50	0.19		27.01	106	
800	5.13	34.52E	0.23	3.38	600	6.32	34.47	0.19		27.11	96	
993	4.32	34.57E	0.36	3.42	700	5.62	34.49	0.18		27.22	86	
					800	5.13	34.52	0.23		27.30	78	
					1000	(4.30)	(34.57)	(0.36)		(27.44)	(65)	
CREST; September 6, 1951; 2140, 2157 GCT; 21°20'N, 114°28'W; sounding, 2100 fm; wind, 350°, force 4; weather, overcast; sea, moderate; wire angle, 17°, 28°.												150.80
0	-	33.87E	4.59	0.46	0	24.4	33.87	4.59	0.46	22.69	517	0.00
9	24.23	33.82	4.75	0.48	10	24.2	33.82	4.75	0.48	22.71	515	0.05
23	-	33.78E	4.82	0.44	20	24.2	33.79	4.80	0.47	22.69	517	0.10
46	-	33.86E	5.32	0.45	30	20.8	33.80	4.90	0.44	23.57	433	0.15
68	-	33.78E	5.42	0.47	50	20.0	33.86	5.36	0.45	23.92	400	0.23
89	16.27	-	5.23	0.58	75	17.9	33.79	5.37	0.50	24.39	355	0.33
					100	15.39	33.85	4.40	0.99	25.02	295	0.41
126	12.02	33.95E	2.69	1.79	150	11.42	34.13	2.10	2.23	26.04	198	0.54
166	11.04	34.27E	1.77	2.58	200	10.58	34.47	1.26	2.83	26.46	158	0.63
247	10.04	34.58E	0.78	2.96	250	9.99	34.58	0.75	2.97	26.65	140	0.70
333	8.96	34.52E	0.39	3.12	300	9.40	34.55	0.47	3.07	26.72	133	0.78
416	8.02	34.46E	0.31	3.20	400	8.20	34.47	0.32	3.19	26.85	121	0.91
503	7.10	34.49E	0.28	-	500	7.15	34.49	0.30	3.34	27.01	105	1.03
676	5.86	34.56E	0.19	3.43	600	6.36	34.53	0.25	3.42	27.16	91	1.13
854	4.91	34.53E	0.32	3.47	700	5.70	34.56	0.20	3.43	27.27	81	1.22
1050	4.08	34.56E	0.56	-	800	5.16	34.54	0.25	3.46	27.31	77	1.31
					1000	4.29	34.55	0.52		27.42	67	1.47

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OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn m

150.90 CREST; September 6, 1951; 1655 GCT; 21°00'N, 115°05'W; sounding, 2200 fm; wind, 350°, force 3; weather, overcast; sea, moderate; wire angle, 12°.

0	-	34.02E	4.49		0	24.0	34.02	4.49		22.92	495	0.00
10	24.45	33.99	4.58		10	24.45	33.99	4.58		22.76	510	0.05
24	-	33.95E	4.91		20	24.3	33.96	4.81		22.79	507	0.10
48	-	33.96E	5.14		30	21.6	33.95	5.00		22.55	435	0.15
72	-	33.96E	5.24		50	20.2	33.96	5.16		23.94	398	0.23
96	15.36	33.77E	5.00		75	17.9	33.96	5.23		24.52	343	0.32
146	11.96	33.99E	2.82		100	14.88	33.78	4.81		25.08	290	0.40
192	11.22	34.38E	0.97		150	11.86	34.01	2.64		25.86	214	0.53
284	10.18	34.62E	0.32		200	11.13	34.42	0.80		26.32	171	0.63
383	8.69	34.58E	0.25		250	10.55	34.58	0.39		26.55	149	0.71
475	7.51	34.51E	0.23		300	9.99	34.62	0.31		26.68	137	0.79
574	6.52	34.48E	0.22		400	8.43	34.56	0.25		26.88	118	0.92
761	5.24	34.52E	0.25		500	7.26	34.50	0.22		27.01	106	1.04
955	4.41	34.60E	0.35		600	6.30	34.48	0.22		27.13	95	1.15
1155	3.78	34.64E	0.54		700	5.61	34.50	0.22		27.23	85	1.24
					800	5.04	34.53	0.27		27.32	77	1.33
					1000	4.25	34.61	0.37		27.47	62	1.49

150.100 CREST; September 6, 1951; 1123 GCT; 20°39'N, 115°43'W; sounding, 2960 fm; wind, 030°, force 3; weather, overcast; sea, moderate; wire angle, 10°.

0	-	34.13E	4.49	0.36	0	24.8	34.13	4.49	0.36	22.77	510	0.00
10	24.84	34.08	4.57	0.39	10	24.84	34.08	4.57	0.39	22.72	514	0.05
24	-	34.16E	4.63	0.40	20	24.7	34.14	4.63	0.40	22.81	506	0.10
48	-	34.20E	5.07	0.42	30	24.1	34.17	4.65	0.41	23.01	487	0.15
72	-	33.98E	5.21	0.42	50	20.7	34.20	5.13	0.42	23.99	393	0.24
96	16.58	33.87E	5.07	0.56	75	18.9	33.97	5.20	0.42	24.28	365	0.33
146	11.86	33.86E	3.38	1.50	100	15.80	33.86	5.02	0.66	24.94	303	0.42
191	11.69	34.56E	0.79	2.50	150	11.82	33.87	2.90	1.60	25.77	224	0.55
280	10.37	34.64E	0.51	2.82	200	11.65	34.58	0.69	2.55	26.35	169	0.65
376	8.98	34.58E	0.25	-	250	10.97	34.63	0.51	2.75	26.52	153	0.74
467	7.70	34.52E	0.23	3.08	300	10.05	34.63	0.49	2.86	26.67	138	0.81
563	6.72	34.54E	0.33	3.20	400	8.66	34.56	0.22	3.02	26.85	121	0.95
750	5.45	34.59E	0.35	-	500	7.34	34.52	0.27	3.10	27.01	105	1.07
938	4.60	34.56E	0.47	3.34	600	6.44	34.55	0.34	(3.24)	27.16	91	1.17
1137	3.97	34.63E	0.56	3.38	700	5.75	34.58	0.35	(3.30)	27.28	81	1.26
					800	5.19	34.59	0.37	(3.32)	27.35	73	1.35
					1000	4.37	34.57	0.52	3.35	27.43	66	1.50

153.16 CREST; September 8, 1951; 1139 GCT; 22°55'N, 110°07.5'W; sounding, 650 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 00°.

0	-	34.72E	3.93	-	0	27.9	34.72	3.93		22.23	561	0.00
10	27.91	34.72E	3.98	0.48	10	27.91	34.72	3.98	0.48	22.23	561	0.06
25	-	34.60E	4.10	0.50	20	27.4	34.66	4.05	0.49	22.35	549	0.11
50	-	34.48E	4.17	-	30	26.1	34.58	4.12	0.50	22.71	515	0.16
75	-	34.19E	4.34	0.66	50	24.4	34.48	4.17	0.53	23.15	473	0.26
100	16.12	34.47E	1.90	1.80	75	19.3	34.19	4.34	0.66	24.35	359	0.37
153	13.49	34.79E	0.24	2.60	100	16.12	34.47	1.90	1.80	25.33	265	0.45
201	12.71	34.61E	0.18	-	150	13.60		0.26	2.59			
248	11.64	34.86E	0.12	2.73	200	12.74		0.19	2.67			
295	11.05	34.67E	0.20	2.84	250	11.62		0.12	2.74			
393	9.89	34.73E	0.19	2.88	300	10.99		0.20	2.85			
486	8.52	34.66E	0.19	3.03	400	9.82		0.19	2.88			
585	7.03	34.89E	0.23	3.12	500	8.33		0.21	3.04			
682	5.80	34.64E	0.22	-	600	6.83		0.23				
785	4.90	34.58E	0.27	-	700	5.62		0.23				
					800	(4.79)						

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	10^{-5} cm^3/g	dyn m

CREST; September 8, 1951; 1420 GCT; 22°48'N, 110°22'W; sounding, 800 fm; wind, direction missing, force 1; weather, partly cloudy; sea, moderate; wire angle, 03°. 153.20

0	-	34.74E	3.66		0	27.8	34.74	3.66		22.28	556	0.00
10	27.85	34.65	3.84		10	27.85	34.65	3.84		22.21	563	0.06
25	-	34.70E	4.05		20	26.6	34.69	4.01		22.63	522	0.11
50	-	34.25E	2.82u		30	25.5	34.69	4.05		22.98	489	0.16
75	-	33.92E	3.36		50	20.3	34.25	3.97		24.13	379	0.25
99	14.23	34.57E	0.68		75	16.8	33.92	3.36		24.76	320	0.34
153	12.82	34.84E	0.15		100	14.20	34.58	0.66		25.84	217	0.40
199	12.17	34.85E	0.13		150	12.90	34.83	0.16		26.30	173	0.50
293	11.22	34.80E	0.14		200	12.17	34.85	0.12		26.46	158	0.59
391	9.50	34.64E	0.12		250	11.63	34.83	0.15		26.55	150	0.67
484	8.34	34.60E	0.12		300	11.15	34.80	0.12		26.61	144	0.74
					400	9.35	34.63	0.11		26.79	126	0.88
					500	(8.19)	(34.60)	(0.11)		(26.95)	(111)	(1.01)

CREST; September 9, 1951; 0158 GCT; 22°33'N, 109°23'W; sounding, 1550 fm; wind, 250°, force 2; weather, partly cloudy; sea, moderate; wire angle, 04°. 157.10

0	-	34.44E	3.87	0.38	0	28.6	34.44	3.87	0.38	21.80	602	0.00
10	27.86	34.60E	4.04	0.32	10	27.86	34.60	4.04	0.32	22.15	568	0.06
24	-	34.66E	4.30	0.36	20	27.2	34.65	4.28	0.32	22.41	543	0.11
50	-	34.64E	3.55	0.69	30	26.6	34.66	4.28	0.42	22.61	525	0.17
75	-	34.75E	2.24	1.52	50	25.5	34.64	3.55	0.69	22.94	493	0.27
99	16.22	34.70E	0.32	2.44	75	20.0	34.75	2.24	1.52	24.59	335	0.37
153	13.44	34.87E	0.19	2.64	100	16.4	34.70	0.30	2.44	25.44	255	0.45
201	12.46	34.86E	0.22	2.66	150	13.55	34.86	0.19	2.63	26.19	183	0.56
292	11.43	34.90E	0.25	2.84	200	12.50	34.86	0.22	2.66	26.40	163	0.65
387	10.23	34.77E	0.21	2.93	250	11.88	34.88	0.24	2.74	26.54	150	0.73
478	8.60	34.61E	0.12	3.07	300	11.34	34.90	0.24	2.85	26.66	139	0.81
574	7.31	34.59E	0.22	3.22	400	10.00	34.75	0.19	2.94	26.78	128	0.95
762	5.52	34.56E	0.15	3.36	500	8.30	34.60	0.13	3.12	26.94	113	1.07
950	4.54	34.59E	0.27	3.32	600	7.01	34.59	0.22	3.24	27.11	96	1.18
1152	3.92	34.64E	0.43	3.30	700	6.05	34.57	0.18	3.33	27.23	85	1.28
					800	5.30	34.56	0.16	3.36	27.31	77	1.37
					1000	4.36	34.60	0.33	3.31	27.45	64	1.53

CREST; September 8, 1951; 2041 GCT; 22°13'N, 110°00'W; sounding, 1800 fm; wind, calm; weather, partly cloudy; sea, moderate; wire angle, 00°. 157.20

0	-	34.75E	4.12	0.54	0	28.9	34.75	4.12	0.54	21.93	590	0.00
10	28.54	34.76	4.02	0.63	10	28.54	34.76	4.02	0.63	22.05	578	0.06
25	-	34.65E	4.23	0.58	20	27.8	34.71	4.18	0.58	22.26	558	0.12
52	-	34.23E	4.77	0.70	30	27.2	34.56	4.50	0.58	22.35	550	0.17
75	-	34.44E	2.16	-	50	19.6	34.23	4.75	0.69	24.30	363	0.26
100	14.42	34.43E	1.51	2.20	75	17.2	34.44	2.16	1.86	25.06	291	0.34
154	12.65	34.65E	0.45	2.74	100	14.42	34.43	1.51	2.20	25.68	232	0.41
203	12.36	34.87E	0.25	-	150	12.72	34.62	0.50	2.71	26.17	185	0.52
296	11.28	34.83E	0.19	-	200	12.38	34.86	0.25	(2.87)	26.43	161	0.60
393	10.25	34.74E	0.23	2.99	250	11.91	34.86	0.20	(2.90)	26.52	152	0.69
487	8.51	34.64E	0.20	3.22	300	11.23	34.83	0.19	(2.92)	26.62	143	0.76
584	7.06	34.55E	0.17	3.34	400	10.16	34.73	0.23	3.00	26.74	132	0.91
775	5.24	34.59E	0.30	3.58	500	8.30	34.63	0.20	3.24	26.96	111	1.03
966	4.33	34.58E	0.39	3.52	600	6.88	34.55	0.17	3.36	27.10	97	1.14
1168	3.53	-	0.68	-	700	5.87	34.57	0.22	3.49	27.25	83	1.24
					800	5.09	34.59	0.32	3.58	27.36	73	1.33
					1000	4.21	(34.58)	0.42	(3.50)	(27.46)	(64)	(1.48)

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

59.53
(440)

BLACK DOUGLAS; September 26, 1951; 0629, 0659 GCT; 38°05'N, 123°15'W; sounding, 64 fm; wind, 320°, force 3; weather, drizzle; sea, rough; wire angle, 09°, 17°.

0	12.98			0	12.98	
10	12.48			10	12.48	
24	11.58			20	11.85	
49	10.02			30	11.19	
				50	10.20	
48a)	10.57			75	9.70	
71	9.74			100	(9.15)	
93	9.31					

59.55
(451)

BLACK DOUGLAS; September 26, 1951; 1053 GCT; 37°55'N, 123°25'W; sounding, 85 fm; wind, 320°, force 3; weather, drizzle; sea, rough; wire angle, 04°.

0	12.89		5.66	0	12.89	5.66
10	12.86	33.26	5.55	10	12.86	5.55
25	12.42		5.52	20	12.70	5.54
50	10.80		4.47	30	12.16	5.47
74	9.78		3.90	50	10.80	4.45
98	9.36		3.23	75	9.76	3.89
123	8.80		3.01	100	9.31	3.21
152	8.57		2.52	150	8.58	2.58

60.53
(449)

BLACK DOUGLAS; September 26, 1951; 1416 GCT; 37°55'N, 123°05'W; sounding, 47 fm; wind, 320°, force 2; weather, drizzle; sea, rough; wire angle, 04°.

0	12.10		5.66	0	12.10	5.66
10	11.83	33.40	5.58	10	11.83	5.58
25	11.02		4.27	20	11.41	4.65
49	9.82		3.37	30	10.51	4.03
74	9.48		2.32	50	9.80	3.34
				75	(9.46)	(2.15)

60.55
(459)

BLACK DOUGLAS; September 26, 1951; 2353 GCT; 37°45'N, 123°15'W; sounding, 450 fm; wind, 300°, force 2; weather, overcast; sea, moderate; wire angle, 06°.

10	14.39	33.30	5.58	0	14.4	
25	-		5.33	10	14.39	5.58
50	10.39		4.07	20	13.9	5.43
75	-		3.40	30	13.6	5.18
99	9.32		2.93	50	10.39	4.07
150	8.84		2.74	75	9.7	3.40
195	8.55		2.41	100	9.3	2.92
241	8.17		2.15	150	8.84	2.74
288	7.65		2.02	200	8.53	2.38
337	7.31		1.74	250	8.08	2.12
383	7.02		1.46	300	7.54	1.95
477	6.19		0.84	400	6.90	1.34
574	5.48		0.51	500	6.00	0.75
671	4.90		0.37	600	5.31	0.46

a) Overlapping casts; reconciliation of temperature curve.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

60.60

BLACK DOUGLAS; October 6, 1951; 1433 GCT; 37°37'N, 123°37'W; sounding, 1800 fm; wind, 350°, force 3; weather, clear; sea, rough; wire angle, 08°.

0	-		5.24	0	15.2	5.24
10	15.18	33.22	5.76	10	15.18	5.76
25	-		5.56	20	15.2	5.71
50	11.64		4.81	30	15.1	5.25
74	-		3.84	50	11.64	4.81
98	8.99		3.33	75	9.6	3.84
149	8.40		2.83	100	9.0	3.31
195	8.04		2.34	150	8.40	2.81
285	7.11		1.62	200	8.00	2.30
382	6.59		0.98	250	7.44	1.89
474	5.73		0.69	300	7.01	1.50
572	5.20		0.44	400	6.46	0.92
763	4.54		0.34	500	5.56	0.62
951	3.94		0.45	600	5.09	0.41
1147	3.40		0.83	700	4.73	0.34
				800	4.43	0.36
				1000	3.79	0.53

60.70

BLACK DOUGLAS; October 6, 1951; 0616 GCT; 37°17'N, 124°21'W; sounding, 2200 fm; wind, 350°, force 4; weather, clear; sea, very rough; wire angle, 08°.

0	-		5.57	0	15.3	5.57
10	15.26	33.25	5.64	10	15.26	5.64
25	-		5.67	20	15.3	5.68
49	11.50		5.29	30	15.3	5.63
73	-		4.45	50	11.5	5.29
96	8.96		3.41	75	9.6	4.27
148	8.59		2.68	100	9.0	3.32
195	7.90		2.53	150	8.56	2.65
287	6.74		1.91	200	7.81	2.51
385	5.94		0.97	250	7.17	2.23
478	5.57		0.61	300	6.60	1.72
576	4.95		0.51	400	5.85	0.89
767	4.24		0.37	500	5.46	0.58
955	3.77		0.67	600	4.81	0.50
1153	3.25		0.63	700	4.44	0.42
				800	4.14	0.40
				1000	3.68	0.66

60.80

BLACK DOUGLAS; October 5, 1951; 2220 GCT; 36°57'N, 125°04'W; sounding, 2320 fm; wind, 350°, force 5; weather, partly cloudy; sea, very rough; wire angle, 14°.

0	-		5.53	0	16.2	5.53
9	16.19	32.97	5.48	10	16.2	5.48
24	-		5.59	20	16.3	5.55
53	10.04		5.42	30	14.2	5.60
76	-		5.16	50	10.2	5.45
104	8.82		4.22	75	9.2	5.16
153	7.75		3.61	100	8.9	4.40
202	7.20		3.04	150	7.80	3.64
299	6.44		1.71	200	7.23	3.06
400	-		1.00	250	(6.81)	2.40
498	5.12		0.68	300	(6.44)	1.70
596	-		0.41	400	(5.71)	1.00
785	4.23		0.36	500	(5.11)	0.66
977	3.68		0.52	600	(4.70)	0.41
1171	3.28		-	700	(4.44)	0.37
				800	(4.19)	0.38
				1000	(3.61)	(0.55)

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

61.53
(457)

BLACK DOUGLAS; September 26, 1951; 2028 GCT; 37°45'N, 122°55'W; sounding, 30 fm; wind, 240°, force 1; weather, overcast; sea, moderate; wire angle, 00°.

0	13.00		6.02	0	13.00	6.02
10	12.92	33.38	6.00	10	12.92	6.00
25	11.59		3.97u	20	11.62	
40	10.48		4.83u	30	11.06	
48	10.21		3.74			

61.55
(467)

BLACK DOUGLAS; September 27, 1951; 0459, 0537 GCT; 37°35'N, 123°05'W; sounding, 520 fm; wind, 300°, force 1; weather, drizzle; sea, moderate; wire angle, 00°, 04°.

0	-		0	13.6	
10	13.22	33.35	10	13.22	
25	-		20	11.9	
49	10.12		30	11.4	
74	-		50	10.1	
98	9.20		75	9.6	
			100	9.1	
99a)	9.23		150	8.94	
151	8.92		200	8.50	
198	8.52		250	8.01	
291	7.66		300	7.58	
481	6.04		400	6.72	
580	5.42		500	5.91	
676	4.85		600	5.31	
776	4.50		700	4.73	
873	4.08		800	4.41	

61.55
(467)

BLACK DOUGLAS; September 27, 1951; 0804 GCT;[b] 37°35'N, 123°05'W; sounding, 520 fm; wind, 300°, force 1; weather, drizzle; sea, moderate; wire angle, 00°.

0	13.42	
10	13.06	33.34
20	12.61	
30	11.86	
40	11.21	
49	10.60	
68	9.78	
87	9.31	
106	9.33	
120	9.18c)	
125	9.06	
132	8.99	

61.59
(477)

BLACK DOUGLAS; September 27, 1951; 1955 GCT; 37°25'N, 123°15'W; sounding, 660 fm; wind, 270°, force 1; weather, drizzle; sea, moderate; wire angle, 08°.

0	-		5.42	0	14.4	5.42
10	14.28	33.27	-	10	14.28	5.38
25	-		5.13	20	13.9	5.24
49	11.62		3.33u	30	13.6	5.00
72	-		3.00u	50	11.6	4.42
95	9.06		3.36	75	9.7	3.79
146	8.43		2.68	100	8.9	3.30
194	8.10		2.26	150	8.39	2.64
287	7.31		1.60	200	8.06	2.22
384	6.83		1.15	250	7.65	1.86
478	6.20		0.79	300	7.22	1.52
577	5.55		0.56	400	6.75	1.09
670	4.77		0.37	500	6.04	0.73
769	4.30		0.42	600	5.33	0.50
960	3.79		0.48	700	4.60	0.37
				800	4.19	0.46
				1000	(3.73)	(0.49)

a) Overlapping casts; reconciliation of temperature curve.
b) Bathythermograph calibration cast.
c) Alternate value, 9.32°C, not used in interpolation.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; September 27, 1951; 1117 GCT; 37°35'N, 122°45'W; sounding, 30 fm; wind, calm; weather, overcast; sea, moderate; wire angle, 00°. 62.53 (465)

0	13.54		5.80	0	13.54	5.80
10	12.34	33.30	4.95	10	12.34	4.95
25	10.83		3.88	20	11.21	4.23
40	10.01		3.30	30	10.52	3.74
48	9.88		2.68			

BLACK DOUGLAS; September 27, 1951; 1640 GCT; 37°25'N, 122°55'W; sounding, 160 fm; wind, calm; weather, drizzle; sea, slight; wire angle, 00°. 62.55 (475)

0	14.09		5.62	0	14.09	5.62
10	13.67	33.21	5.24	10	13.67	5.24
25	11.03		4.60	20	11.72	4.83
50	9.76		3.54	30	10.68	4.35
74	9.48		3.07	50	9.76	3.54
98	9.39		3.01	75	9.47	3.06
149	8.98		2.65	100	9.38	3.00
196	8.71		2.39	150	8.96	2.65
245	8.24		2.10	200	8.68	2.37
				250	(8.19)	(2.06)

BLACK DOUGLAS; September 27, 1951; 2310 GCT; 37°15'N, 123°05'W; sounding, 410 fm; wind, 180°, force 1; weather, drizzle; sea, moderate; wire angle, 00°. 62.57 (482)

0	-		5.45	0	16.2	5.45
10	15.96	33.22	5.53	10	15.96	5.53
25	-		5.45	20	15.4	5.49
50	12.54		5.21	30	14.6	5.42
74	-		4.44	50	12.54	5.21
98	8.85		3.73	75	10.7	4.43
150	8.42		2.87	100	8.8	3.71
197	8.10		2.77	150	8.42	2.87
244	7.65		2.22	200	8.07	2.74
290	7.26		2.18	250	7.59	2.20
342	7.01		1.56	300	7.20	2.11
388	6.45		1.32	400	6.35	1.23
483	5.88		0.66	500	5.77	0.59
582	5.14		0.41	600	5.08	0.40
679	4.86		0.36			

BLACK DOUGLAS; September 28, 1951; 0226 GCT; 37°15'N, 122°45'W; sounding, 65 fm; wind, 140°, force 2; weather, overcast; sea, slight; wire angle, 02°. 63.55 (480)

0	15.62		5.45	0	15.62	5.45
10	13.52	33.24	5.40	10	13.52	5.40
25	13.10		5.40	20	13.20	5.41
50	10.00		4.53	30	12.99	5.38
75	9.67		3.48	50	10.00	4.53
98	9.44		3.09	75	9.67	3.48
				100	(9.43)	(3.05)

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L
63.57 (505)	BLACK DOUGLAS; September 28, 1951; 0939 GCT; 37°05'N, 122°55'W; sounding, 400 fm; wind, 220°, force 1; weather, overcast; sea, slight; wire angle, 01°.					
0	-		3.68u	0	15.9	
10	15.85	33.23	5.63	10	15.85	5.63
25	-		5.55	20	15.8	5.59
50	11.66		5.02	30	15.6	5.51
74	-		4.24	50	11.66	5.02
98	9.18		3.65	75	9.9	4.23
150	8.49		2.74	100	9.2	3.63
196	7.99		2.60	150	8.49	2.74
242	7.56		2.24	200	7.95	2.59
289	7.11		1.74	250	7.48	2.16
341	6.69		1.29	300	7.01	1.63
387	6.15		1.08	400	6.04	1.03
481	5.56		0.62	500	5.48	0.60
581	5.26		0.56	600	5.20	0.54
678	4.90		0.41			
64.54 (503)	BLACK DOUGLAS; September 28, 1951; 0642 GCT; 37°05'N, 122°35'W; sounding, 63 fm; wind, 140°, force 1; weather, overcast; sea, slight; wire angle, 00°.					
0	15.12a)		5.63	0	15.12	5.63
10	14.88	33.18	5.76	10	14.88	5.76
25	14.30		5.69	20	14.52	5.73
50	10.90		4.38	30	14.00	5.60
75	9.76		3.90	50	10.90	4.38
98	9.52		3.09	75	9.76	3.90
				100	(9.51)	(3.03)
64.57 (513)	BLACK DOUGLAS; September 28, 1951; 1358 GCT; 36°55'N, 122°45'W; sounding, 1020 fm; wind, calm; weather, drizzle; sea, slight; wire angle, 05°.					
0	-		5.33	0	16.5	5.33
10	16.15	33.20	5.34	10	16.15	5.34
25	-		5.14	20	16.0	5.28
49	10.92		4.97	30	13.6	5.08
73	-		3.93	50	10.9	4.96
97	9.29		3.51	75	9.5	3.90
148	8.50		2.77	100	9.2	3.45
192	8.20		2.56	150	8.49	2.75
282	7.32		1.94	200	8.13	2.52
376	6.39		1.16	250	7.66	2.18
467	5.78		0.73	300	7.12	1.80
564	5.34		0.51	400	6.19	1.02
752	4.56		0.35	500	5.61	0.64
939	3.94		0.49	600	5.19	0.47
1135	3.30		0.64	700	4.77	0.37
				800	4.37	0.39
				1000	3.78	0.54

a) Alternate value, 15.35°C, not used in interpolation.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

66.53 (511)

BLACK DOUGLAS; September 28, 1951; 1845 GCT; 36°55'N, 122°25'W; sounding, 300 fm; wind, 140°, force 2; weather, drizzle; sea, moderate; wire angle, 11°.

0	-		6.02	0	13.7	6.02
10	12.65	33.31	5.81	10	12.65	5.81
24	-		4.36	20	12.2	5.21
49	10.06		4.23	30	11.2	4.31
72	-		3.82	50	10.0	4.22
95	9.61		3.35	75	9.9	3.71
144	9.12		2.77	100	9.6	3.27
188	8.83		2.43	150	9.08	2.72
232	8.44		2.05	200	8.74	2.31
276	7.99		1.72	250	8.25	1.92
327	7.54		1.43	300	7.76	1.57
373	7.20		1.26	400	6.90	1.08
420	6.64		0.96	500	(5.99)	
469	6.20		1.05			

66.56 (521)

BLACK DOUGLAS; September 29, 1951; 0709 GCT; 36°45'N, 122°35'W; sounding, 1250 fm; wind, calm; weather, overcast; sea, slight; wire angle, 00°.

0	-		5.50	0	16.4	5.50
10	16.36	33.21	5.46	10	16.36	5.46
25	-		5.84	20	15.7	5.81
50	11.96		5.18	30	14.1	5.81
74	-		4.07	50	11.96	5.18
98	10.16		3.80	75	10.5	4.06
150	8.63		2.99	100	10.1	3.78
197	8.00		2.75	150	8.63	2.99
291	7.02		2.02	200	7.95	2.73
389	6.27		1.10	250	7.41	2.36
483	5.68		0.79	300	6.94	1.96
581	5.17		0.40	400	6.19	1.03
773	4.38		0.32	500	5.58	0.76
962	3.82		0.49	600	5.07	0.36
1161	3.36		0.62	700	4.64	0.30
				800	4.29	0.33
				1000	3.73	0.53

67.50 (509)

BLACK DOUGLAS; September 28, 1951; 2140 GCT; 36°55'N, 122°05'W; sounding, 25 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 00°.

0	13.62		6.86	0	13.62	6.86
10	12.33	33.33	6.00	10	12.33	6.00
20	11.60		4.95	20	11.60	4.95
30	10.48		4.18	30	10.48	4.18
38	10.37		4.05			

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

67.53
(519)

BLACK DOUGLAS; September 29, 1951; 0332, 0359 GCT; 36°45'N, 122°15'W; sounding, 460 fm; wind, calm; weather, overcast; sea, slight; wire angle, 00°, 00°.

0	-		5.91	0	14.0	5.91
10	13.41	33.26	6.14	10	13.41	6.14
25	-		5.97	20	13.1	6.05
50	10.73		4.59	30	12.5	5.76
				50	10.9	4.59
50a)	11.10		-	75	10.1	4.15
75	-		4.15	100	9.2	3.65
99	9.27		3.65	150	8.72	3.14
152	8.70		3.11	200	8.34	2.40
198	8.37		2.41	250	7.93	1.88
245	7.96		1.92	300	7.85	1.55
291	7.88		1.59	400	6.91	1.06
388	7.02		1.10	500	5.96	0.77
483	6.09		0.84	600	5.28	0.33
580	5.39		0.34	700	4.83	0.39
672	4.96		0.40			
772	4.52		0.33			

67.56
(529)

BLACK DOUGLAS; September 29, 1951; 1005 GCT; 36°35'N, 122°25'W; sounding, 1320 fm; wind, calm; weather, fog; sea, slight; wire angle, 03°.

0	-		6.19	0	13.8	6.19
10	12.74	33.28	5.91	10	12.74	5.91
25	-		4.83	20	11.6	5.39
50	10.23		4.00	30	11.1	4.58
74	-		3.79	50	10.23	4.00
98	9.07		3.49	75	9.7	3.78
150	8.38		2.66	100	9.2	3.43
197	8.04		2.25	150	8.38	2.66
290	6.96		1.66	200	8.03	2.22
389	6.24		1.03	250	7.41	1.93
482	5.75		0.71	300	6.87	1.60
580	5.27		0.43	400	6.19	0.99
771	4.46		0.33	500	5.68	0.68
959	3.83		0.52	600	5.17	0.39
1157	3.40		0.60	700	4.73	0.33
				800	4.37	0.34
				1000	3.73	0.57

68.50
(517)

BLACK DOUGLAS; September 29, 1951; 0022 GCT; 36°45'N, 121°55'W; sounding, 52 fm; wind, 220°, force 1; weather, cloudy; sea, slight; wire angle, 00°.

0	14.34	5.76	0	14.34	5.76
10	13.94	5.46	10	13.94	5.46
25	12.42	5.23	20	13.11	5.30
50	10.75	4.30	30	11.93	5.12
75	10.12	3.61	50	10.75	4.30
			75	10.12	3.61

a) Overlapping casts; reconciliation of temperature curve.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; September 29, 1951; 1410 GCT; 36°35'N, 122°05'W; sounding, 730 fm; wind, 090°, force 1; weather, overcast; sea, slight; wire angle, 00°. 68.54 (527)

0	-		5.65	0	14.9	5.65
10	12.96	33.23	5.91	10	12.96	5.91
25	-		5.16	20	12.2	5.72
50	10.64		4.19	30	11.4	4.90
74	-		3.60	50	10.64	4.19
98	9.70		3.39	75	9.9	3.59
151	9.48		3.05	100	9.7	3.38
199	9.08		2.61	150	9.48	3.06
292	8.10		1.63	200	9.07	2.61
390	6.94		1.19	250	8.51	1.97
484	6.04		0.76	300	8.02	1.59
582	5.35		0.48	400	6.83	1.15
677	4.92		0.36	500	5.91	0.71
775	4.60		0.48	600	5.25	0.45
968	3.90		0.56	700	4.84	0.37
				800	4.52	0.52
				1000	(3.80)	(0.57)

BLACK DOUGLAS; September 30, 1951; 2019 GCT; 36°25'N, 122°15'W; sounding, 710 fm; wind, 130°, force 2; weather, cloudy; sea, moderate; wire angle, 03°. 68.56 (534)

0	-		5.72	0	15.8	5.72
10	15.38	33.21	5.86	10	15.38	5.86
25	-		5.80	20	14.6	5.84
49	12.10		5.12	30	13.4	5.71
74	-		4.13	50	12.1	5.07
98	10.16		3.53	75	10.8	4.12
151	9.38		3.07	100	10.1	3.50
199	8.71		2.33	150	9.40	3.09
292	7.86		1.49	200	8.70	2.31
390	6.96		1.10	250	8.24	1.78
483	5.86		1.15	300	7.79	1.45
582	5.44		0.56	400	6.84	1.09
772	4.54		0.37	500	5.76	1.08
958	3.84		0.53	600	5.38	0.51
1153	3.30		0.70	700	4.89	0.40
				800	4.42	0.38
				1000	3.70	0.59

BLACK DOUGLAS; October 1, 1951; 0111 GCT; 36°15'N, 122°05'W; sounding, 300 fm; wind, 130°, force 2; weather, cloudy; sea, moderate; wire angle, 12°. 69.55 (540)

0	-		6.07	0	14.4	6.07
10	12.32	33.24	5.34	10	12.32	5.34
24	-		4.90	20	11.6	5.00
48	10.65		4.20	30	11.2	4.74
72	-		3.79	50	10.6	4.12
94	9.94		3.59	75	10.4	3.77
143	9.15		2.88	100	9.8	3.52
186	8.72		2.35	150	9.07	2.78
231	8.39		2.19	200	8.62	2.30
276	8.02		1.43	250	8.23	1.89
327	7.68		1.51	300	7.84	1.48
374	7.54		1.11	400	7.25	1.07
422	6.88		1.05	500	(6.26)	
470	6.48		0.95			

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

70.54 (549)

BLACK DOUGLAS; October 1, 1951; 0605 GCT; 36°05'N, 121°55'W; sounding, 610 fm; wind, 130°, force 2; weather, overcast; sea, slight; wire angle, 00°.

0	-		5.38	0	15.6	5.38
10	15.52	33.21	5.78	10	15.52	5.78
25	-		5.62	20	14.1	5.71
50	11.54		4.88	30	13.0	5.50
74	-		4.26	50	11.54	4.88
98	9.96		3.65	75	10.3	4.22
149	9.10		2.88	100	10.0	3.61
197	8.40		2.57	150	9.08	2.86
290	7.42		1.79	200	8.37	2.55
388	6.77		0.89	250	7.81	2.20
481	5.96		0.65	300	7.32	1.67
580	5.36		0.45	400	6.69	0.84
674	4.98		0.33	500	5.80	0.61
776	4.68		0.35	600	5.27	0.41
971	3.97		0.54	700	4.89	0.33
				800	4.59	0.38
				1000	(3.86)	(0.55)

70.60

BLACK DOUGLAS; October 3, 1951; 0447 GCT; 35°53'N, 122°23'W; sounding, 1700 fm; wind, 320°, force 3; weather, overcast; sea, rough; wire angle, 15°.

0	-		4.40	0	16.3	4.40
9	16.28	33.23	4.31	10	16.3	4.31
24	-		4.58	20	15.1	4.56
48	12.76		4.14	30	14.4	4.54
72	-		3.37	50	12.7	4.10
95	9.38		2.99	75	10.0	3.31
145	8.66		2.23	100	9.3	2.91
190	8.27		1.84	150	8.60	2.19
281	7.30		1.38	200	8.17	1.76
377	6.32		0.92	250	7.65	1.50
466	5.89		0.53	300	7.08	1.30
561	5.41		0.36	400	6.20	0.80
745	4.63		0.27	500	5.74	0.44
927	3.96		0.36	600	5.25	0.36
1113	3.47		0.43	700	4.81	0.29
				800	4.40	0.29
				1000	3.75	0.40

70.70

BLACK DOUGLAS; October 3, 1951; 1150 GCT; 35°33'N, 123°06'W; sounding, 2140 fm; wind, 330°, force 4; weather, clear; sea, rough; wire angle, 12°.

0	-		4.28	0	17.1	4.28
10	17.10	33.13	4.23	10	17.10	4.23
24	-		4.48	20	17.0	4.45
48	14.32		4.32	30	15.6	4.48
72	-		4.05	50	14.3	4.31
94	9.06		3.47	75	10.3	4.00
144	8.41		2.52	100	9.0	3.18
188	7.87		2.25	150	8.34	2.48
277	6.95		1.28	200	7.70	2.18
373	6.09		0.78	250	7.20	1.70
464	5.71		0.50	300	6.73	1.10
562	5.24		0.32	400	5.96	0.70
752	4.48		0.29	500	5.56	0.42
942	3.92		0.46	600	5.07	0.30
1138	3.44		0.61	700	4.66	0.31
				800	4.31	0.34
				1000	3.71	0.51

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

70.80

BLACK DOUGLAS; October 3, 1951; 1905 GCT; 35°13'N, 123°48'W; sounding, 2000 fm; wind, 330°, force 5; weather, cloudy; sea, very rough; wire angle, 20°.

0	-		4.02	0	17.6	4.02
9	17.46	33.07	4.16	10	17.5	4.18
23	-		4.19	20	17.4	4.20
46	14.98		4.20	30	16.9	4.20
69	-		4.36	50	14.5	4.21
91	9.82		3.92	75	11.6	4.32
137	8.74		2.76	100	9.6	3.67
177	8.26		2.00	150	8.57	2.45
257	7.17		1.77	200	7.90	1.88
339	6.59		0.94	250	7.24	1.80
417	6.03		0.63	300	6.84	1.29
500	5.56		0.40	400	6.15	0.69
661	4.76		0.27	500	5.56	0.41
				600	5.02	0.29

70.90

BLACK DOUGLAS; October 4, 1951; 0250, 0332 GCT; 34°53'N, 124°30'W; sounding, 2420 fm; wind, 330°, force 6; weather, partly cloudy; sea, very rough; wire angle, 28°, 27°.

0	-		4.17	0	18.1	4.17
8	18.22	33.03	4.13	10	18.2	4.15
22	-		4.49	20	17.6	4.44
47	12.56		4.64	30	15.9	4.56
67	-		4.50	50	12.6	4.62
				75	10.1	4.44
92	9.40		4.39	100	9.3	4.35
133	8.56		3.15	150	8.32	2.85
176	8.06		2.52	200	7.75	2.32
265	7.00		1.98	250	7.14	2.04
356	6.58		1.01	300	6.81	1.68
446	5.62		0.55	400	6.18	0.72
536	4.84		0.42	500	5.08	0.45
721	4.36		0.25	600	4.63	0.37
913	3.76		0.32	700	4.40	0.27
1109	3.45		-	800	4.10	0.29
				1000	3.59	

71.54
(555)

BLACK DOUGLAS; October 1, 1951; 0938 GCT; 35°55'N, 121°45'W; sounding, 520 fm; wind, 130°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°.

0	-		5.99	0	15.4	5.99
10	14.88	33.22	6.00	10	14.88	6.00
25	-		5.45	20	13.3	5.85
49	10.94		4.43	30	12.8	5.14
73	-		3.94	50	10.9	4.42
97	9.68		3.34	75	10.3	3.92
147	9.13		2.76	100	9.7	3.26
191	8.68		2.32	150	9.10	2.73
236	8.26		1.64	200	8.59	2.16
280	7.98		1.41	250	8.16	1.54
374	7.30		1.08	300	7.84	1.35
466	6.32		0.79	400	7.06	1.00
564	5.48		0.48	500	6.00	0.65
659	4.89		0.41	600	5.22	0.45
760	4.64		0.35	700	4.76	0.40

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

7252
(562)

BLACK DOUGLAS; October 1, 1951; 1356 GCT; 35°45'N, 121°35'W; sounding, 310 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 16°.

0	-		5.84	0	15.0	5.84
9	14.49	33.31	5.76	10	14.5	5.71
24	-		5.26	20	13.4	5.44
48	10.92		4.38	30	12.7	5.08
72	-		3.65	50	11.1	4.25
94	9.71		3.26	75	10.2	3.58
144	9.12		2.68	100	9.7	3.17
187	8.80		2.30	150	9.05	2.62
230	8.46		2.02	200	8.71	2.20
273	7.79		1.78	250	8.10	1.92
323	7.54		1.26	300	7.64	1.54
368	7.21		1.02	400	6.72	0.95
413	6.60		0.92	500	(6.13)	
460	6.32		0.95			

7352
(603)

BLACK DOUGLAS; October 1, 1951; 1744 GCT; 35°35'N, 121°25'W; sounding, 280 fm; wind, 160°, force 1; weather, overcast; sea, slight; wire angle, 15°.

0	-		5.44	0	16.4	5.44
10	15.86	33.28	5.77	10	15.86	5.77
24	13.52		5.48	20	14.2	5.60
48	-		4.53	30	13.3	5.31
71	-		3.81	50	10.7	4.45
94	9.96		3.57	75	10.2	3.75
142	9.66		3.16	100	10.0	3.51
187	8.99		2.84	150	9.60	3.10
231	8.45		1.95	200	8.79	2.64
276	7.97		1.54	250	8.25	1.74
325	7.77		1.39	300	7.85	1.46
371	7.44		1.16			

7352
(603)

BLACK DOUGLAS; October 1, 1951; 1905 GCT;[a] 35°35'N, 121°25'W; sounding, 250 fm; wind, 160°, force 1; weather, overcast; sea, slight; wire angle, 00°.

0	16.36	
10	16.24	33.28
20	15.10	
30	14.41	
40	13.32	
49	12.15	
69	10.36	
88	10.04	
108	9.66	
123	9.12	
128	9.23	
135	9.49	

a) Bathythermograph calibration cast.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; October 2, 1951; 2136 GCT; 35°18'N, 121°58.5'W; sounding, 1380 fm; wind, 330°, force 2; weather, partly cloudy; sea, moderate; wire angle, 14°. 73.60

0	-		4.23	0	17.5	4.23
10	16.39	33.22	4.34	10	16.39	4.34
24	-		4.54	20	15.4	4.52
48	11.60		3.94	30	14.3	4.53
73	-		3.24	50	11.6	3.91
96	9.08		2.67	75	9.7	3.20
147	8.67		2.15	100	9.0	2.62
192	7.98		2.37	150	8.62	2.16
281	7.13		1.51	200	7.90	2.36
374	6.48		0.91	250	7.41	1.80
463	5.83		0.53	300	6.99	1.36
556	5.38		0.35	400	6.29	0.77
737	4.61		0.24	500	5.64	0.44
914	4.03		0.34	600	5.20	0.30
1105	3.48		0.49	700	4.78	0.24
				800	4.37	0.28
				1000	3.81	0.40

BLACK DOUGLAS; October 1, 1951; 2220 GCT; 35°25'N, 121°15'W; sounding, 220 fm; wind, 180°, force 1; weather, cloudy; sea, slight; wire angle, 02°. 74.53 (609)

0	16.25		5.72	0	16.25	5.72
10	14.52	33.31	5.65	10	14.52	5.65
25	12.47		4.92	20	13.02	5.32
50	10.71		4.17	30	11.90	4.70
74	10.14		3.62	50	10.71	4.17
98	9.82		3.21	75	10.14	3.60
149	9.29		2.63	100	9.81	3.20
195	8.40		2.50	150	9.28	2.62
240	8.26		2.24	200	8.37	2.47
287	8.00		1.83	250	8.21	2.16
340	7.66		1.24	300	7.90	1.70

BLACK DOUGLAS; October 2, 1951; 0126 GCT; 35°15'N, 121°05'W; sounding, 220 fm; wind, calm; weather, clear; sea, slight; wire angle, 02°. 76.52 (616)

0	17.16		5.47	0	17.16	5.47
10	16.39	33.35	5.65	10	16.39	5.65
25	13.82		5.77	20	14.79	5.74
50	11.46		4.78	30	13.31	5.75
75	10.19		3.57	50	11.46	4.78
100	9.97		3.33	75	10.19	3.57
153	9.55		2.81	100	9.97	3.33
200	9.20		2.40	150	9.57	2.84
248	8.66		2.26	200	9.20	2.40
295	8.25		2.01	250	8.63	2.26
347	7.72		1.72	300	8.20	1.99

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OBSERVED				INTERPOLATED		
Z	T	S	O_2	Z	T	O_2
m	°C	‰	ml/L	m	°C	ml/L

77.50 BLACK DOUGLAS; October 2, 1951; 0507 GCT; 35°04.5'N, 120°52'W; sounding, 82 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 00°.

0	16.86		5.69	0	16.86	5.69
10	15.84	33.33	5.80	10	15.84	5.80
25	15.48		5.86	20	15.56	5.85
50	13.25		5.30	30	15.40	5.82
75	11.44		4.54	50	13.25	5.30
100	10.23		3.74	75	11.44	4.54
125	10.02		3.53	100	10.23	3.74
156	9.52		2.80	150	9.67	3.06

77.55 BLACK DOUGLAS; October 2, 1951; 0824 GCT; 34°54.5'N, 121°13'W; sounding, 320 fm; wind, calm; weather, drizzle; sea, slight; wire angle, 05°.

0	-		4.40	0	16.5	4.40
10	16.16	33.30	4.53	10	16.16	4.53
25	-		4.62	20	14.9	4.60
50	11.90		3.61	30	14.0	4.59
75	-		2.77	50	11.90	3.61
99	9.26		2.39	75	9.8	2.77
151	8.83		1.95	100	9.2	2.38
199	7.98		2.11	150	8.83	1.95
245	7.54		1.76	200	7.98	2.11
291	6.96		1.44	250	7.49	1.71
342	6.56		1.25	300	6.87	1.39
389	6.47		0.79	400	6.40	0.74
438	6.10		0.65	500	(5.66)	(0.46)
485	5.76		0.51			

77.65 BLACK DOUGLAS; October 2, 1951; 1446 GCT; 34°34'N, 121°55'W; sounding, 2060 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 00°.

0	-		4.33	0	17.0	4.33
10	16.13	33.27	4.43	10	16.13	4.43
25	-		4.43	20	15.6	4.43
50	11.72		3.80	30	14.5	4.37
74	-		3.29	50	11.72	3.80
98	9.12		2.81	75		3.26
150	8.52		2.17	100		2.79
197	8.02		1.84	150	8.52	2.17
290	7.31		1.22	200	8.00	1.81
388	6.62		0.73	250	7.60	1.48
482	5.99		0.53	300	7.24	1.18
580	5.34		0.33	400	6.53	0.69
771	4.48		0.28	500	5.87	0.51
958	3.89		0.47	600	5.23	0.30
1156	3.41		0.57	700	4.78	0.27
				800	4.37	0.29
				1000	3.79	0.51

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T}^{-5} 10^{-5} cm^3/g	ΔD dyn. m

PAOLINA-T; September 28, 1951; 1915 GCT; 34°26.5'N, 120°33.5'W; sounding, 50 fm; wind, 270°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°. 80.51

0	16.99	33.50E	0	16.99	33.50	24.39	355	0.00
10	15.36	33.26	10	15.36	33.26	24.58	337	0.03
25	13.69	33.35E	20	14.16	33.33	24.89	307	0.07
51	11.68	33.34E	30	13.26	33.35	25.09	289	0.10
75	11.64	33.45E	50	11.70	33.34	25.38	261	0.15
			75	11.64	33.45	25.47	252	0.22

PAOLINA-T; September 28, 1951; 2159 GCT; 34°19'N, 120°49.5'W; sounding, 723 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 07°. 80.55

0	16.48	33.36E	0	16.48	33.36	24.40	354	0.00
10	15.23	33.49E	10	15.23	33.49	24.78	318	0.03
25	12.99	33.52E	20	14.08	33.52	25.05	292	0.06
50	10.41	33.37E	30	12.90	33.51	25.28	270	0.09
75	-	33.72E	50	10.41	33.37	25.63	236	0.14
99	9.40	33.86E	75	9.76	33.72	26.02	200	0.20
151	8.82	34.02E	100	9.38	33.86	26.18	184	0.25
200	8.40	34.21E	150	8.83	34.02	26.40	164	0.33
250	7.52	-	200	8.40	34.21	26.62	143	0.41
298	7.25	34.14E	250	7.52	34.14	26.69	136	0.48
352	6.71	34.23E	300	7.23	34.14	26.74	132	0.55
401	6.28	34.21E	400	6.30	34.21	26.91	115	0.68
499	5.78	34.30E	500	5.78	34.30	27.05	102	0.79
602	5.42	34.25	600	5.43	34.25	27.06	101	0.90
703	4.90	34.47uE	700	4.92				

PAOLINA-T; September 29, 1951; 0131 GCT; 34°08.5'N, 121°11'W; sounding, 1200 fm; wind, 270°, force 1; weather, overcast; sea, slight; wire angle, 00°. 80.60

0	16.81	33.30	0	16.81	33.30	24.27	366	0.00
10	16.18	-	10	16.18	33.25	24.38	355	0.04
25	16.02	-	20	16.07	33.24	24.40	353	0.07
50	10.50	33.09E	30	13.90	33.13	24.79	317	0.11
75	-	33.66E	50	10.50	33.09	25.40	259	0.16
100	9.22	33.92E	75	9.68	33.66	25.99	203	0.22
154	8.58	34.01E	100	9.22	33.92	26.26	177	0.27
202	8.34	-	150	8.62	34.00	26.42	162	0.36
300	7.64	-	200	8.36	34.07	26.51	153	0.44
404	7.03	34.29E	250	8.04	34.13	26.61	144	0.51
502	6.42	34.50uE	300	7.65	34.19	26.71	134	0.58
605	5.56	34.27E	400	7.06	34.29	26.87	119	0.71
807	4.52	34.51E	500	6.44	34.29	26.96	111	0.83
1006	3.91	34.58E	600	5.60	34.27	27.05	102	0.95
1210	3.36	-	700	5.01	34.37	27.19	88	1.05
			800	4.55	34.50	27.36	73	1.13
			1000	3.93	34.58	27.48	61	1.28

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Paolina-T samples on Cruise 5110, it is estimated that the mean effect of evaporation was 0.053‰, with a standard deviation of 0.061‰.

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

80.70 PAOLINA-T; September 29, 1951; 0750 GCT; 33°48.5'N, 121°49'W; sounding, 1950 fm; wind, 270°, force 3; weather, drizzle; sea, moderate; wire angle, 22°.

0	16.72	-	0	16.72	(33.40)	(24.37)	(356)	(0.00)
8	16.31	33.44E	10	16.28	33.44	24.51	344	0.04
23	15.87	-	20	15.98	33.50	24.62	333	0.07
46	13.04	33.61E	30	15.70	33.55	24.73	323	0.10
68	-	33.62E	50	12.40	33.61	25.46	254	0.16
91	9.32	33.96E	75	9.56	33.64	25.99	203	0.22
139	8.95	-	100	9.20	33.99	26.32	171	0.26
184	8.80	34.20E	150	8.91	34.12	26.46	157	0.35
273	8.36	-	200	8.74	(34.23)	(26.58)	(147)	(0.42)
370	7.48	34.55E	250	8.50	(34.33)	(26.69)	(136)	(0.50)
461	6.44	-	300	8.17	(34.42)	(26.82)	(124)	(0.56)
558	5.98	-	400	7.08				
754	4.69	-	500	6.24				
946	4.06	-	600	5.74				
1147	3.50	-	700	5.06				
			800	4.48				
			1000	3.93				

80.80 PAOLINA-T; September 29, 1951; 1427 GCT; 33°25.5'N, 122°29'W; sounding, 2150 fm; wind, 270°, force 2; weather, fog; sea, moderate; wire angle, 03°.

0	17.69	33.22E	0	17.69	33.22	24.00	392	0.00
10	17.67	33.15	10	17.67	33.15	23.96	396	0.04
25	17.47	33.30E	20	17.54	33.26	24.07	385	0.08
50	14.27	33.04E	30	16.90	33.28	24.24	369	0.12
75	-	33.00E	50	14.27	33.04	24.64	331	0.19
99	10.28	33.20E	75	11.69	33.00	25.12	285	0.26
153	8.86	33.71E	100	10.24	33.20	25.53	247	0.33
202	8.06	34.10E	150	8.91	33.68	26.12	190	0.44
300	6.90	34.12E	200	8.09	34.09	26.57	148	0.53
403	6.04	34.23E	250	7.46	34.11	26.68	138	0.60
502	5.52	34.29E	300	6.90	34.12	26.76	129	0.67
605	5.06	34.38E	400	6.06	34.23	26.96	111	0.80
806	4.51	34.51E	500	5.54	34.29	27.08	100	0.91
1006	3.95	34.57E	600	5.09	34.37	27.19	89	1.01
1210	3.49	-	700	4.76	34.45	27.29	79	1.10
			800	4.52	34.51	27.36	72	1.18
			1000	3.98	34.57	27.47	62	1.33

80.90 PAOLINA-T; September 29, 1951; 2045 GCT; 33°12'N, 123°11.5'W; sounding, 2200 fm; wind, 270°, force 1; weather, cloudy; sea, moderate; wire angle, 00°.

0	17.81	33.18E	0	17.81	33.18	23.95	397	0.00
10	17.65	33.19	10	17.65	33.19	23.99	393	0.04
25	17.55	33.29E	20	17.58	33.27	24.07	385	0.08
50	15.68	33.20E	30	17.52	33.29	24.11	382	0.12
75	-	33.12E	50	15.68	33.20	24.45	348	0.19
99	10.52	33.23E	75	12.50	33.12	25.06	291	0.27
153	8.98	33.75E	100	10.51	33.25	25.52	247	0.34
202	8.54	34.02E	150	9.03	33.73	26.14	188	0.45
299	7.58	34.22E	200	8.56	34.01	26.44	160	0.54
404	6.89	34.27E	250	8.09	34.15	26.62	143	0.62
502	5.80	34.21E	300	7.58	34.22	26.74	131	0.69
605	5.48	34.39E	400	6.91	34.27	26.88	118	0.82
808	4.52	34.44E	500	5.81	34.21	26.98	109	0.94
1005	3.86	34.49E	600	5.50	34.38	27.15	92	1.04
1209	3.49	34.62E	700	5.09	34.42	27.23	85	1.14
			800	4.56	34.44	27.31	78	1.23
			1000	3.88	34.49	27.41	68	1.39

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

PAOLINA-T; September 30, 1951; 0320 GCT; 32°49.5'N, 123°54'W; sounding, 2350 fm; wind, 220°, force 1; weather, partly cloudy; sea, moderate; wire angle, 07°. 80.100

0	18.94	33.27E	0	18.94	33.27	23.74	417	0.00
10	18.59	33.35	10	18.59	33.35	23.89	403	0.04
25	18.75	33.48E	20	18.74	33.44	23.92	400	0.08
50	16.32	33.13E	30	18.70	33.46	23.95	397	0.12
75	-	33.22E	50	16.32	33.13	24.02	390	0.20
100	11.35	33.18E	75	13.40	33.22	24.96	301	0.29
153	9.20	33.63E	100	11.35	33.18	25.32	266	0.36
201	8.40	33.95E	150	9.28	33.61	26.01	201	0.48
298	7.18	34.14E	200	8.42	33.94	26.40	164	0.57
400	6.16	34.19E	250	7.75	34.08	26.62	143	0.65
497	5.50	34.28E	300	7.15	34.14	26.75	131	0.72
600	5.06	34.36E	400	6.16	34.19	26.92	115	0.85
800	4.49	34.50E	500	5.49	34.28	27.07	100	0.96
996	3.94	34.49E	600	5.05	34.36	27.18	90	1.06
1201	3.41	34.59E	700	4.74	34.43	27.28	81	1.15
			800	4.49	34.50	27.36	73	1.24
			1000	3.93	34.49	27.41	68	1.39

PAOLINA-T; September 28, 1951; 1235 GCT; 33°41.5'N, 120°27'W; sounding, 500 fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 00°. 83.55

0	16.06	33.36E	0	16.06	33.36	24.50	345	0.00
10	15.60	33.37	10	15.60	33.37	24.61	334	0.03
25	15.61	33.47E	20	15.61	33.43	24.65	330	0.07
50	12.14	33.54E	30	15.59	33.48	24.69	326	0.10
75	-	33.68E	50	12.14	33.54	25.45	254	0.16
99	9.32	33.83E	75	9.73	33.68	25.99	203	0.22
153	9.10	34.07E	100	9.31	33.84	26.18	184	0.26
202	8.60	34.15E	150	9.12	34.06	26.39	165	0.35
252	7.74	34.24E	200	8.62	34.14	26.53	152	0.43
300	7.46	34.25E	250	7.77	34.24	26.74	132	0.51
404	7.12	34.37E	300	7.46	34.25	26.79	127	0.57
501	6.17	34.36E	400	7.13	34.36	26.92	115	0.70
605	5.45	34.42E	500	6.19	34.36	27.05	102	0.81
703	4.86	34.59uE	600	5.47	34.41	27.18	90	0.91
808	4.64	34.50E	700	4.88	34.46	27.28	80	1.00
			800	4.66	34.50	27.34	75	1.09

PAOLINA-T; September 28, 1951; 0800 GCT; 33°34'N, 120°44.5'W; sounding, 738 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 05°. 83.60

0	16.33	33.38E	0	16.33	33.38	24.45	349	0.00
10	15.60	33.35	10	15.60	33.35	24.59	336	0.03
25	14.50	33.33E	20	14.98	33.33	24.72	324	0.07
50	10.12	33.58E	30	13.10	33.33	25.10	287	0.10
75	-	33.76E	50	10.12	33.58	25.84	217	0.15
100	9.36	33.94E	75	9.65	33.76	26.06	196	0.20
155	8.94	34.14E	100	9.36	33.94	26.25	178	0.25
203	8.35	34.18E	150	9.00	34.13	26.46	158	0.33
301	7.49	34.28E	200	8.40	34.18	26.59	146	0.41
405	6.92	34.29E	250	7.91	34.23	26.70	135	0.48
503	6.26	34.41E	300	7.50	34.28	26.80	126	0.55
606	5.64	34.42E	400	6.94	34.29	26.89	117	0.67
811	4.61	34.46E	500	6.29	34.41	27.07	100	0.79
1009	3.90	34.57E	600	5.66	34.42	27.16	92	0.89
1213	3.33	34.64E	700	5.18	34.43	27.23	85	0.98
			800	4.68	34.45	27.30	78	1.07
			1000	3.93	34.56	27.47	62	1.22

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

85.38

PAOLINA-T; September 27, 1951; 1400 GCT; 34°00.5'N, 119°04'W; sounding, 200 fm; wind, 270°, force 1; weather, cloudy; sea, slight; wire angle, 00°.

0	18.34	33.41E	0	18.34	33.41	23.99	393	0.00
10	16.80	33.30	10	16.80	33.30	24.28	365	0.04
25	-	33.18E	20	14.83	33.20	24.64	331	0.07
50	11.98	33.22E	30	13.74	33.18	24.86	310	0.10
75	10.92	33.49E	50	11.98	33.22	25.24	274	0.16
			75	10.92	33.49	25.63	236	0.23

85.40

PAOLINA-T; September 27, 1951; 1549 GCT; 33°58'N, 119°10.5'W; sounding, 360 fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 00°.

0	18.77	33.47E	0	18.77	33.47	23.93	398	0.00
10	18.78	33.40	10	18.78	33.40	23.88	404	0.04
25	-	33.22E	20	17.10	33.24	24.16	376	0.08
50	12.82	33.23E	30	15.30	33.22	24.56	339	0.11
75	-	33.37E	50	12.82	33.23	25.08	289	0.18
99	10.60	33.66E	75	11.48	33.37	25.44	255	0.25
153	9.88	33.91E	100	10.58	33.67	25.84	217	0.30
202	9.40	34.14E	150	9.93	33.89	26.12	190	0.41
251	8.46	34.14E	200	9.43	34.13	26.39	165	0.50
300	8.63a)	34.24E	250	8.46	34.14	26.55	149	0.58
354	8.15	34.30E	300	8.63	34.24	26.60	144	0.66
403	7.36	34.34E	400	7.41	34.34	26.86	120	0.79
453	7.00	-	500	6.71	34.39	27.00	107	0.91
503	6.68	34.39E	600	5.91	34.43	27.14	94	1.02
607	5.85	34.43E						

85.50

PAOLINA-T; September 27, 1951; 2138 GCT; 33°40.5'N, 119°51'W; sounding, 75 fm; wind, 270°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.

0	17.84	33.47E	0	17.84	33.47	24.16	377	0.00
10	17.62	33.37	10	17.62	33.37	24.13	379	0.04
25	14.86	33.29E	20	16.70	33.30	24.30	363	0.07
50	10.54	33.45E	30	13.25	33.29	25.04	293	0.11
75	10.18	33.62E	50	10.54	33.45	25.67	233	0.16
100	9.56	33.95E	75	10.18	33.62	25.86	215	0.22
			100	9.56	33.95	26.23	180	0.27

85.60

PAOLINA-T; September 28, 1951; 0405 GCT; 33°17'N, 120°33.5'W; sounding, 800 fm; wind, 270°, force 2; weather, overcast; sea, slight; wire angle, 04°.

0	17.34	-	0	17.34	(33.33)	(24.17)	(375)	(0.00)
10	17.29	33.33	10	17.29	33.33	24.18	374	0.04
25	17.27	33.42E	20	17.28	33.39	24.23	370	0.07
49	14.68	33.51E	30	17.23	33.44	24.28	365	0.11
75	-	33.56E	50	14.49	33.51	24.96	301	0.18
100	9.32	33.76E	75	11.20	33.56	25.64	236	0.25
153	8.44	34.04E	100	9.32	33.76	26.12	190	0.30
202	7.74	34.07E	150	8.48	34.03	26.46	158	0.39
299	7.30	34.33E	200	7.76	34.07	26.60	145	0.46
403	6.66	-	250	7.50	34.19	26.73	132	0.54
501	6.04	-	300	7.30	(34.33)	(26.87)	(119)	(0.60)
604	5.52	34.46E	400	6.69	(34.39)	(27.00)	(106)	(0.72)
808	4.42	34.54E	500	6.05	(34.43)	(27.12)	(96)	(0.82)
1005	3.88	34.57E	600	5.53	(34.46)	(27.21)	(87)	(0.92)
1210	3.34	34.64E	700	5.00	34.50	27.30	78	(1.01)
			800	4.46	34.54	27.39	69	(1.09)
			1000	3.89	34.57	27.48	62	(1.23)

a) Alternate value, 8.72°C, not used in interpolation.

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} T^3 cm/g	dyn. m

PAOLINA-T; October 3, 1951; 0819 GCT; 33°28'N, 117°46'W; sounding, 125 fm; wind, 320°, force 1; weather, partly cloudy; sea, slight; wire angle, 05°. 90.28

0	18.02	33.38E	0	18.02	33.38	24.04	388	0.00
10	16.56	33.30	10	16.56	33.30	24.33	360	0.04
25	14.09	33.29E	20	14.83	33.29	24.71	324	0.07
50	11.82	-	30	13.30	33.30	25.04	293	0.10
75	-	33.58E	50	11.82	33.43	25.42	256	0.16
99	10.42	33.58E	75	11.00	33.58	25.69	231	0.22
124	10.34	33.82E	100	10.41	33.58	25.79	221	0.28
152	9.94	33.86E	150	9.99	33.86	26.09	193	0.38

PAOLINA-T; October 3, 1951; 0604 GCT; 33°24'N, 117°55'W; sounding, 250 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 05°. 90.30

0	19.07	33.42E	0	19.07	33.42	23.82	409	0.00
10	19.05	33.38	10	19.05	33.38	23.79	412	0.04
25	15.72	33.41E	20	17.20	33.40	24.26	367	0.08
50	11.79	33.42E	30	14.80	33.41	24.81	315	0.11
75	-	33.48E	50	11.79	33.42	25.42	256	0.17
99	10.41	33.74E	75	10.95	33.48	25.62	238	0.23
154	9.78	34.07E	100	10.39	33.75	25.94	208	0.29
203	9.38	34.14E	150	9.82	34.06	26.27	176	0.39
252	9.12	34.23E	200	9.41	34.13	26.39	164	0.47
302	8.58	-	250	9.13	34.23	26.52	153	0.56
356	7.86	34.33E	300	8.61	34.28	26.64	141	0.63
406	7.41	34.26E	400	7.44	34.27	26.80	126	0.77

PAOLINA-T; October 2, 1951; 0046 GCT; 33°10.5'N, 118°22.5'W; sounding, 600 fm; wind, 270°, force 3; weather, partly cloudy; sea, rough; wire angle, 20°. 90.37

0	18.84	33.35E	0	18.84	33.35	23.82	409	0.00
9	16.82	33.24	10	16.20	33.24	24.37	357	0.04
23	12.72	33.41E	20	13.15	33.39	25.14	283	0.07
46	11.25	33.45E	30	12.17	33.42	25.36	263	0.10
69	-	33.55E	50	11.02	33.46	25.59	240	0.15
92	9.99	33.86E	75	10.25	33.63	25.86	215	0.20
142	9.64	34.11E	100	9.90	33.91	26.14	188	0.26
190	9.46	34.25E	150	9.61	34.14	26.36	167	0.35
282	8.48	34.31E	200	9.40	34.26	26.49	155	0.43
381	7.38	34.34E	250	8.89	34.30	26.61	144	0.50
474	6.59	34.40E	300	8.26	34.32	26.72	133	0.58
574	5.90	34.34E	400	7.20	34.35	26.90	116	0.70
671	5.42	34.47E	500	6.39	34.39	27.05	102	0.82
775	4.94	34.62uE	600	5.76	34.36	27.10	97	0.92
873	4.43	34.52E	700	5.29	34.48	27.25	83	1.02
			800	4.81	34.50	27.32	76	1.10

PAOLINA-T; October 1, 1951; 1915 GCT; 32°52.5'N, 118°55'W; sounding, 850 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 32°. 90.45

0	18.69	-	0	18.69	(33.43)	(23.92)	(400)	(0.00)
8	18.44	33.43	10	18.41	33.46	24.02	390	0.04
21	16.76	33.60E	20	18.28	33.60	24.15	378	0.08
42	11.93	33.47E	30	13.25	33.54	25.24	274	0.11
63	-	33.59E	50	11.36	33.50	25.56	243	0.16
83	9.77	33.68E	75	10.01	33.64	25.91	210	0.22
124	9.05	33.90E	100	9.44	33.76	26.10	192	0.27
160	8.68	34.02E	150	8.77	33.99	26.39	165	0.36
231	8.24	34.26E	200	8.41	34.17	26.58	147	0.44
305	7.65	34.27E	250	8.11	34.26	26.70	135	0.51
375	7.18	34.36E	300	7.70	34.27	26.76	129	0.58
452	6.64	34.36E	400	7.03	34.36	26.93	113	0.70
607	5.86	34.40E	500	6.36	34.37	27.03	104	0.82
772	4.98	34.48E	600	5.89	34.40	27.11	96	0.92
955	4.26	34.59E	700	5.38	34.44	27.21	87	1.02
			800	4.84	34.50	27.32	76	1.11
			1000	(4.13)	(34.62)	(27.49)	(60)	(1.26)

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OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

90.53

PAOLINA-T; October 1, 1951; 1400 GCT; 32°42.5'N, 119°30'W; sounding, 600 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 04°.

0	18.20	33.47E	0	18.20	33.47	24.07	385	0.00
10	18.19	33.44	10	18.19	33.44	24.05	387	0.04
25	18.16	33.47E	20	18.18	33.46	24.07	385	0.08
50	14.96	33.19E	30	18.12	33.46	24.08	384	0.12
75	-	33.28E	50	14.96	33.19	24.61	334	0.19
99	11.14	33.34E	75	12.70	33.28	25.14	283	0.26
153	9.45	33.87E	100	11.10	33.34	25.49	250	0.33
201	8.70	34.07E	150	9.52	33.84	26.15	188	0.44
299	8.12	34.26E	200	8.71	34.06	26.45	159	0.53
403	6.42	34.17E	250	8.38	34.20	26.61	144	0.61
500	5.90	34.37E	300	8.12	34.26	26.70	136	0.68
603	5.42	34.42E	400	6.45	34.17	26.86	120	0.82
702	5.07	34.43E	500	5.90	34.37	27.09	98	0.93
805	4.76	34.54E	600	5.43	34.42	27.19	89	1.03
1005	4.08	34.54E	700	5.08	34.43	27.23	85	1.12
			800	4.78	34.54	27.36	73	1.21
			1000	4.10	34.54	27.43	66	1.36

90.60

PAOLINA-T; October 1, 1951; 0909 GCT; 32°26.5'N, 119°58'W; sounding, 820 fm; wind, 320°, force 3; weather, missing; sea, moderate; wire angle, 02°.

0	17.68	33.38E	0	17.68	33.38	24.13	380	0.00
10	17.53	33.26	10	17.53	33.26	24.07	385	0.04
25	17.38	33.39E	20	17.42	33.32	24.15	378	0.08
50	16.70	33.49E	30	17.33	33.42	24.25	368	0.11
75	-	33.18E	50	16.70	33.49	24.45	349	0.19
100	10.52	33.35E	75	13.80	33.18	24.85	311	0.27
153	9.02	33.91E	100	10.52	33.35	25.60	240	0.34
202	8.36	34.13E	150	9.08	33.87	26.24	179	0.44
301	7.04	34.15E	200	8.40	34.13	26.56	149	0.53
404	6.16	34.22E	250	7.70	34.14	26.66	139	0.60
503	5.47	34.29E	300	7.06	34.15	26.76	130	0.67
606	5.08	34.34E	400	6.19	34.21	26.93	114	0.80
808	4.44	34.46E	500	5.49	34.29	27.07	100	0.91
1005	3.88	34.58E	600	5.11	34.33	27.15	92	1.01
1209	3.34	34.60E	700	4.79	34.39	27.24	84	1.10
			800	4.47	34.45	27.32	76	1.19
			1000	3.90	34.58	27.48	61	1.34

90.70

PAOLINA-T; October 1, 1951; 0238 GCT; 32°04.5'N, 120°39.5'W; sounding, 2150 fm; wind, 270°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.

0	18.12	33.32E	0	18.12	33.32	23.98	394	0.00
10	17.55	33.28	10	17.55	33.28	24.08	384	0.04
25	16.85	33.39E	20	17.09	33.35	24.25	368	0.08
50	14.76	33.28E	30	16.63	33.38	24.38	356	0.11
75	-	33.21E	50	14.76	33.28	24.72	324	0.18
100	9.55	33.53E	75	11.38	33.21	25.34	264	0.25
153	8.49	33.96E	100	9.55	33.53	25.90	211	0.32
203	7.88	34.15E	150	8.53	33.94	26.38	165	0.41
300	6.81	34.14E	200	7.92	34.14	26.64	141	0.49
403	5.96	34.28E	250	7.37	34.15	26.72	133	0.56
499	5.46	34.34E	300	6.81	34.14	26.79	127	0.63
601	5.04	34.36E	400	5.98	34.28	27.01	106	0.75
801	4.54	34.50E	500	5.45	34.34	27.12	95	0.85
997	3.92	34.55E	600	5.05	34.36	27.18	90	0.95
1201	3.44	34.60E	700	4.77	34.43	27.27	81	1.04
			800	4.54	34.50	27.35	73	1.12
			1000	3.91	34.55	27.46	63	1.27

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} T_3 cm/g	dyn. m

PAOLINA-T; October 3, 1951; 1421, 1445 GCT; 32°56.5'N, 117°19.5'W; sounding, 140 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 04°, 06°. 93.27

0	17.49	33.31E	0	17.49	33.31	24.12	380	0.00
10	15.47	33.26	10	15.47	33.26	24.55	340	0.04
25	13.34	33.30E	20	13.78	33.28	24.92	304	0.07
49	11.68	33.39E	30	12.80	33.31	25.15	283	0.10
73	11.10	33.58E	50	11.65	33.39	25.42	256	0.15
97	10.76	33.68E	75	11.06	33.58	25.68	232	0.21
			100	(10.72)	(33.69)	(25.83)	(218)	(0.27)
203	9.53	34.12E						

PAOLINA-T; October 3, 1951; 1706, 1740 GCT; 32°50.5'N, 117°30.5'W; sounding, 400 fm; wind, 270°, force 1; weather, partly cloudy; sea, slight; wire angle, 10°, 10°. 93.30

0	18.60	33.38E	0	18.60	33.38	23.90	401	0.00
10	17.60	33.30	10	17.60	33.30	24.09	384	0.04
25	14.85	33.30E	20	15.75	33.30	24.52	343	0.08
49	12.03	33.27E	30	14.30	33.29	24.83	313	0.11
74	-	33.40E	50	12.01	33.27	25.27	271	0.17
98	9.98	33.67E	75	10.26	33.40	25.68	232	0.23
150	9.87	34.01E	100	9.98	33.69	25.96	206	0.28
198	9.85	34.13E	150	9.87	34.01	26.22	181	0.38
246	9.43	34.12E	200	9.83	34.13	26.32	171	0.47
293	8.68	34.31E	250	9.39	34.12	26.39	165	0.56
345	7.67	34.30E	300	8.54	34.31	26.67	138	0.64
393	7.33	34.31E	400	7.30	34.31	26.86	120	0.77
			500	6.67	34.44	27.05	102	0.89
395	7.32	34.24uE	600	5.91	34.43	27.14	94	0.99
491	6.72	34.44E	700	(5.00)	(34.28)	(27.13)	(95)	(1.09)
593	5.97	34.43E						
689	5.11	34.29E						

PAOLINA-T; October 3, 1951; 2340 GCT; 32°29'N, 118°09.5'W; sounding, 950 fm; wind, 320°, force 3; weather, partly cloudy; sea, rough; wire angle, 10°. 93.40

0	19.41	33.52E	0	19.41	33.52	23.81	410	0.00
10	19.16	33.48	10	19.16	33.48	23.84	407	0.04
25	15.45	33.34E	20	17.30	33.37	24.22	371	0.08
49	10.82	33.44E	30	14.20	33.35	24.89	307	0.11
74	-	33.62E	50	10.78	33.44	25.62	237	0.17
98	9.28	33.78E	75	9.75	33.62	25.94	208	0.22
152	8.76	34.06E	100	9.26	33.79	26.15	188	0.27
200	8.40	34.13E	150	8.79	34.05	26.43	161	0.36
296	8.27	34.24E	200	8.40	34.13	26.56	149	0.44
397	6.79	34.34E	250	8.30	34.19	26.62	143	0.52
493	6.03	34.39E	300	8.26	34.24	26.66	139	0.59
593	5.52	34.49E	400	6.74	34.34	26.96	111	0.72
792	4.70	34.48E	500	5.99	34.39	27.09	98	0.83
988	3.99	34.56E	600	5.49	34.49	27.24	84	0.92
1189	3.38	34.50E	700	5.06	34.49	27.28	80	1.01
			800	4.67	34.48	27.32	76	1.09
			1000	3.96	34.56	27.46	63	1.25

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
9350	PAOLINA-T; October 4, 1951; 0654 GCT; 32°08'N, 118°54'W; sounding, 800 fm; wind, 270°, force 3; weather, missing; sea, rough; wire angle, 23°.							
0	18.01	33.40E	0	18.01	33.40	24.06	386	0.00
9	18.00	33.40	10	18.00	33.40	24.06	386	0.04
23	17.80	33.38E	20	17.88	33.39	24.09	383	0.08
50	15.19	33.26E	30	17.66	33.36	24.12	380	0.12
73	-	33.15E	50	15.19	33.26	24.61	334	0.19
101	10.86	33.28E	75	12.80	33.15	25.03	294	0.27
152	9.56	33.68E	100	10.90	33.27	25.47	252	0.34
201	8.65	34.04E	150	9.61	33.65	25.98	203	0.45
299	7.80	34.37E	200	8.68	34.02	26.43	161	0.54
400	7.06	34.28E	250	8.20	34.27	26.69	136	0.62
500	6.08	34.33E	300	7.79	34.37	26.84	122	0.69
599	5.36	34.33E	400	7.06	34.28	26.86	120	0.81
795	4.61	34.52uE	500	6.09	34.33	27.03	104	0.93
999	3.98	34.41E	600	5.35	(34.33)	(27.12)	(95)	(1.03)
1200	3.50	34.54E	700	4.93	(34.34)	(27.18)	(89)	(1.13)
			800	4.60	(34.35)	(27.23)	(85)	(1.23)
			1000	3.99	34.41	27.34	74	(1.40)
9730	PAOLINA-T; October 5, 1951; 0259 GCT; 32°15.5'N, 117°09'W; sounding, 33 fm; wind, 180°, force 1; weather, missing; sea, rough; wire angle, 00°.							
0	15.95	33.29E	0	15.95	33.29	24.47	347	0.00
10	14.85	33.26	10	14.85	33.26	24.68	327	0.03
25	12.86	33.30E	20	13.34	33.27	25.01	296	0.06
50	11.92	33.44E	30	12.60	33.32	25.19	278	0.09
			50	11.92	33.44	25.42	257	0.15
9732	PAOLINA-T; October 5, 1951; 0115 GCT; 32°12'N, 117°17'W; sounding, 730 fm; wind, 270°, force 2; weather, cloudy; sea, rough; wire angle, 05°.							
0	19.07	33.42E	0	19.07	33.42	23.82	409	0.00
10	17.22	33.22	10	17.22	33.22	24.12	381	0.04
25	15.60	33.30E	20	16.40	33.27	24.35	359	0.08
50	12.40	33.32E	30	13.85	33.30	24.93	303	0.11
75	-	33.52E	50	12.40	33.32	25.23	275	0.17
100	11.22	33.60E	75	11.78	33.52	25.50	249	0.23
154	10.27	33.99E	100	11.22	33.60	25.67	233	0.29
203	9.72	34.20E	150	10.33	33.97	26.11	191	0.40
300	8.88	34.34E	200	9.76	34.19	26.38	166	0.49
403	7.56	34.33E	250	9.30	34.29	26.54	151	0.57
500	6.39	34.36E	300	8.88	34.34	26.64	141	0.65
603	5.74	34.41E	400	7.59	34.33	26.83	123	0.78
804	4.78	34.47E	500	6.39	34.36	27.02	105	0.90
1002	3.90	34.53E	600	5.76	34.41	27.14	93	1.01
1205	3.32	34.57E	700	5.26	34.44	27.22	86	1.10
			800	4.80	34.47	27.30	78	1.20
			1000	3.91	34.53	27.44	65	1.35

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

PAOLINA-T; October 4, 1951; 2023 GCT; 31°55.5'N, 117°50'W; sounding, 380 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 05°. 97.40

0	18.34	33.54E	0	18.34	33.54	24.09	383	0.00
10	18.20	33.46	10	18.20	33.46	24.06	386	0.04
25	17.79	33.50E	20	17.96	33.49	24.14	378	0.08
50	14.68	33.30E	30	17.49	33.48	24.25	368	0.11
75	-	33.30E	50	14.68	33.30	24.75	320	0.18
99	9.70	33.54E	75	11.05	33.30	25.47	252	0.25
152	8.62	33.94E	100	9.68	33.56	25.90	211	0.31
200	8.71	34.17E	150	8.63	33.92	26.35	168	0.41
249	8.06	34.32E	200	8.71	34.17	26.54	151	0.49
298	7.52	34.30E	250	8.05	34.32	26.75	130	0.56
352	7.17	34.31E	300	7.50	34.30	26.82	124	0.63
401	6.66	34.34E	400	6.67	34.34	26.96	110	0.75
450	6.48	34.33E	500	6.28	34.37	27.04	103	0.86
500	6.28	34.37E	600	6.01	34.39	27.09	98	0.97
603	6.00	34.39E						

PAOLINA-T; October 4, 1951; 1345 GCT; 31°35.5'N, 118°30.5'W; sounding, 1300 fm; wind, 270°, force 3; weather, overcast; sea, very rough; wire angle, 07°. 97.50

186	9.88	34.20E	200	9.79	34.21	26.39	164
234	9.53	34.22E	250	9.37	34.23	26.48	156
332	7.78	34.31E	300	8.45	34.28	26.66	139
434	6.65	34.35E	400	6.95	34.33	26.92	114
532	6.15	34.42E	500	6.29	34.40	27.07	100
636	5.42	34.42E	600	5.74	34.42	27.15	92
839	4.62	34.47E	700	5.05	34.43	27.23	84
1038	3.96	34.60E	800	4.72	34.46	27.30	78
1243	3.42	34.62E	1000	4.08	34.58	27.47	62

PAOLINA-T; October 5, 1951; 0848 GCT; 31°42'N, 116°42.5'W; sounding, 76 fm; wind, 180°, force 1; weather, missing; sea, moderate; wire angle, 00°. 100.29

0	14.98	33.32E	0	14.98	33.32	24.70	325	0.00
10	14.18	33.30	10	14.18	33.30	24.86	310	0.03
25	13.22	33.33E	20	13.41	33.31	25.03	294	0.06
50	12.62	33.43E	30	13.08	33.35	25.12	285	0.09
75	12.32	33.47E	50	12.62	33.43	25.28	271	0.15
			75	12.32	33.47	25.36	262	0.21

PAOLINA-T; October 5, 1951; 1013 GCT; 31°40.5'N, 116°46.5'W; sounding, 270 fm; wind, 220°, force 1; weather, clear; sea, moderate; wire angle, 03°. 100.30

0	15.68	-	0	15.68	(33.30)	(24.54)	(341)	(0.00)
10	15.24	33.30	10	15.24	33.30	24.63	332	0.03
25	13.18	33.39E	20	13.60	33.37	25.03	294	0.06
50	12.20	33.40E	30	13.01	33.39	25.17	281	0.09
75	11.49	33.58E	50	12.20	33.40	25.33	265	0.15
100	11.31	33.65E	75	11.49	33.58	25.60	240	0.21
154	10.46	33.93E	100	11.31	33.65	25.69	231	0.27
204	10.13	34.20E	150	10.52	33.90	26.03	199	0.38
253	9.66	34.21E	200	10.15	34.19	26.32	172	0.48
302	8.86	34.27E	250	9.70	34.21	26.41	163	0.56
357	8.29	34.41E	300	8.90	34.26	26.58	147	0.64
407	7.64	34.40E	400	7.72	34.40	26.87	119	0.78

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OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

100.40 PAOLINA-T; October 5, 1951; 1621 GCT; 31°21'N, 117°27'W; sounding, 1050 fm; wind, 270°, force 1; weather, overcast; sea, rough; wire angle, 00°.

0	17.94	33.40E	0	17.94	33.40	24.08	384	0.00
10	17.90	33.33	10	17.90	33.33	24.04	388	0.04
25	17.11	33.34E	20	17.69	33.33	24.10	383	0.08
50	14.06	33.47E	30	16.50	33.35	24.39	355	0.11
75	-	33.48E	50	14.06	33.47	25.01	296	0.18
100	10.70	33.66E	75	11.69	33.48	25.49	250	0.25
153	9.02	33.87E	100	10.70	33.66	25.80	220	0.31
203	9.07	34.14E	150	9.04	33.85	26.23	180	0.41
301	8.26	34.36E	200	9.07	34.12	26.44	160	0.50
404	7.10	34.33E	250	8.75	34.29	26.62	142	0.57
501	6.34	34.41E	300	8.28	34.36	26.75	130	0.64
604	5.68	34.45E	400	7.15	34.33	26.89	117	0.77
808	4.71	34.52E	500	6.35	34.41	27.07	100	0.89
1005	3.96	34.57E	600	5.71	34.45	27.18	90	0.99
1208	3.38	34.60E	700	5.18	34.48	27.26	82	1.08
			800	4.74	34.52	27.35	74	1.16
			1000	3.99	34.57	27.47	62	1.31

100.50 PAOLINA-T; October 5, 1951; 2240 GCT; 31°02.5'N, 118°07'W; sounding, 900 fm; wind, 270°, force 1; weather, partly cloudy; sea, very rough; wire angle, 18°.

0	19.54	33.57E	0	19.54	33.57	23.81	410	0.00
8	19.18	33.49	10	19.18	33.49	23.85	407	0.04
21	19.16	33.60E	20	19.16	33.59	23.93	399	0.08
46	16.58	33.32E	30	18.90	33.56	23.97	395	0.12
93	10.90	33.41E	50	15.94	33.32	24.49	345	0.19
141	9.53	-	75	12.50	33.36	25.24	274	0.27
188	8.67	33.95E	100	10.68	33.44	25.64	236	0.34
277	7.55	-	150	9.37	33.73	26.09	193	0.45
375	7.29	34.32E	200	8.48	(33.99)	(26.43)	(161)	(0.54)
467	6.61	34.42E	250	7.75	(34.09)	(26.62)	(143)	(0.61)
565	5.88	34.42E	300	7.47	(34.19)	(26.74)	(132)	(0.68)
754	5.05	34.52E	400	7.18	34.35	26.91	116	(0.81)
946	3.96	34.59E	500	6.34	34.42	27.07	100	(0.93)
1147	3.55	34.64E	600	5.69	34.43	27.17	91	(1.03)
			700	5.25	34.49	27.26	82	(1.12)
			800	4.83	34.54	27.35	73	(1.20)
			1000	3.81	34.61	27.52	58	(1.35)

100.60 PAOLINA-T; October 6, 1951; 0515 GCT; 30°43'N, 118°45.5'W; sounding, 1550 fm; wind, 270°, force 2; weather, missing; sea, rough; wire angle, 08°.

0	19.07	33.43E	0	19.07	33.43	23.82	409	0.00
10	18.86	33.40	10	18.86	33.40	23.86	406	0.04
24	18.84	33.45E	20	18.85	33.44	23.89	403	0.08
50	17.24	33.36E	30	18.79	33.44	23.90	401	0.12
75	-	33.30E	50	17.24	33.36	24.22	371	0.20
99	12.88	33.31E	75	14.69	33.30	24.76	320	0.28
152	9.68	-	100	12.52	33.31	25.20	278	0.36
200	8.74	33.99E	150	9.76	33.73	26.03	199	0.48
297	7.51	34.18E	200	8.74	33.99	26.39	165	0.58
398	6.72	34.32E	250	8.07	34.09	26.57	147	0.66
494	5.90	34.34E	300	7.49	34.18	26.72	133	0.73
595	5.40	34.42E	400	6.69	34.32	26.95	111	0.86
794	4.70	34.49E	500	5.86	34.34	27.07	100	0.96
989	4.14	34.53E	600	5.40	34.42	27.19	88	1.07
1193	3.55	-	700	5.01	34.47	27.27	81	1.16
			800	4.68	34.49	27.33	76	1.24
			1000	4.10	(34.53)	(27.42)	(66)	(1.40)

OBSERVED			INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

100.70

PAOLINA-T; October 6, 1951; 1154 GCT; 30°24.5'N, 119°24'W; sounding, 1050 fm; wind, 350°, force 1; weather, clear; sea, moderate; wire angle, 10°.

0	19.01	33.48E	0	19.01	33.48	23.88	403	0.00
10	19.02	33.47	10	19.02	33.47	23.87	404	0.04
25	19.01	33.45E	20	19.01	33.46	23.87	405	0.08
50	16.10	33.37E	30	18.99	33.44	23.86	406	0.12
98	10.39	33.45E	50	16.10	33.37	24.49	345	0.20
151	9.24	33.88E	75	12.20	33.38	25.31	267	0.27
200	8.49	33.99E	100	10.36	33.46	25.71	229	0.34
295	7.11	34.14E	150	9.28	33.87	26.21	182	0.44
396	6.03	34.18E	200	8.49	33.99	26.43	161	0.53
490	5.69	34.39E	250	7.75	34.07	26.60	144	0.61
591	5.26	34.38E	300	7.03	34.14	26.76	130	0.68
788	4.56	34.44E	400	6.00	34.18	26.93	114	0.80
982	3.99	34.59E	500	5.65	34.39	27.14	94	0.91
1183	3.40	34.59E	600	5.22	34.38	27.18	90	1.01
			700	4.83	34.39	27.23	85	1.10
			800	4.53	34.45	27.32	77	1.19
			1000	3.95	34.59	27.49	60	1.34

100.80

PAOLINA-T; October 6, 1951; 1917 GCT; 30°05'N, 120°03.5'W; sounding, 1200 fm; wind, 270°, force 1; weather, clear; sea, rough; wire angle, 00°.

0	19.45	33.66E	0	19.45	33.66	23.90	401	0.00
10	19.24	33.55	10	19.24	33.55	23.88	404	0.04
25	19.22	33.58E	20	19.23	33.57	23.89	402	0.08
50	17.02	33.46E	30	19.20	33.58	23.91	401	0.12
75	-	33.40E	50	17.02	33.46	24.35	359	0.20
99	9.67	33.70E	75	10.60	33.40	25.63	237	0.27
153	9.22	34.03E	100	9.65	33.70	26.02	200	0.33
201	8.18	34.09E	150	9.24	34.02	26.33	170	0.42
299	7.04	34.14E	200	8.20	34.09	26.56	149	0.50
400	6.77	34.32E	250	7.52	34.11	26.67	139	0.58
497	5.98	34.34E	300	7.03	34.14	26.76	130	0.64
600	5.47	34.49E	400	6.77	34.32	26.94	113	0.77
801	4.46	34.52E	500	5.97	34.34	27.06	101	0.88
998	3.86	34.60E	600	5.47	34.49	27.24	84	0.98
1202	3.36	34.58E	700	4.98	34.51	27.31	77	1.07
			800	4.46	34.52	27.38	71	1.15
			1000	3.84	34.60	27.51	59	1.29

100.90

PAOLINA-T; October 7, 1951; 0157 GCT; 29°41'N, 120°47'W; sounding, 2000 fm; wind, 270°, force 1; weather, partly cloudy; sea, rough; wire angle, 14°.

0	19.23	33.48E	0	19.23	33.48	23.82	409	0.00
10	18.51	33.38	10	18.51	33.38	23.93	399	0.04
24	18.44	33.44E	20	18.46	33.43	23.98	394	0.08
48	15.64	33.27E	30	18.41	33.44	24.00	392	0.12
72	-	33.29E	50	15.30	33.27	24.60	335	0.19
96	11.30	33.33E	75	13.52	33.29	24.99	298	0.27
149	9.49	33.80E	100	11.03	33.34	25.50	249	0.34
196	8.78	33.95E	150	9.48	33.80	26.12	190	0.45
288	7.69	34.19E	200	8.73	33.97	26.38	166	0.54
385	6.59	34.25E	250	8.09	34.11	26.58	146	0.62
479	6.28	34.46E	300	7.54	34.20	26.74	132	0.70
577	5.57	34.43E	400	6.52	34.27	26.94	113	0.82
770	4.67	34.51E	500	6.17	34.45	27.12	95	0.93
961	3.94	34.58E	600	5.43	34.43	27.20	88	1.03
1159	3.45	34.62E	700	4.96	34.48	27.29	79	1.12
			800	4.57	34.52	27.37	72	1.20
			1000	3.82	34.59	27.50	59	1.34

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m
103.30	CREST; October 8, 1951; 2238 GCT; 31°05'N, 116°25'W; sounding, 44 fm; wind, 310°, force 2; weather, partly cloudy; sea, slight; wire angle, 05°.									
0	20.20	33.51E	5.29	0	20.20	33.51	5.29	23.59	431	0.00
10	18.18	33.43E	5.53	10	18.18	33.43	5.53	24.05	387	0.04
25	15.52	33.29E	5.88	20	16.29	33.32	5.83	24.41	353	0.08
50	13.54	33.27E	5.65	30	15.00	33.28	5.86	24.67	328	0.11
75	12.98	33.73E	3.62	50	13.54	33.27	5.65	24.97	300	0.17
				75	12.98	33.73	3.62	25.44	255	0.24
103.35	CREST; October 8, 1951; 1945 GCT; 30°54.5'N, 116°45.5'W; sounding, 1000 fm; wind, 340°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.									
0	-	33.50E	5.01	0	19.8	33.50	5.01	23.69	421	0.00
10	19.02	33.42	5.29	10	19.02	33.42	5.29	23.83	408	0.04
24	-	33.45E	5.08	20	18.9	33.44	5.18	23.88	404	0.08
49	16.70	33.38E	5.52	30	18.7	33.44	5.12	23.93	399	0.12
74	-	33.29E	5.23	50	16.6	33.38	5.52	24.39	355	0.20
97	11.03	33.40E	4.19	75	12.8	33.29	5.20	25.13	284	0.28
149	9.34	33.77E	3.39	100	10.9	33.42	4.08	25.59	241	0.34
196	8.88	34.07E	2.33	150	9.32	33.78	3.34	26.14	189	0.45
292	7.76	34.17E	1.70	200	8.82	34.08	2.29	26.45	159	0.54
392	7.10	34.32E	0.70	250	8.28	34.13	1.99	26.58	147	0.62
488	6.40	34.31E	0.37	300	7.69	34.18	1.64	26.70	135	0.69
587	5.68	34.32E	0.32	400	7.05	34.32	0.65	26.90	116	0.82
785	4.70	34.48E	0.37	500	6.30	34.31	0.35	27.00	107	0.94
979	4.00	34.58E	0.59	600	5.60	34.33	0.33	27.10	97	1.05
1180	3.40	34.55E	0.82	700	5.08	34.41	0.35	27.22	86	1.15
				800	4.64	34.49	0.38	27.34	75	1.24
				1000	3.93	34.58	0.62	27.48	61	1.39
103.40	CREST; October 8, 1951; 1646 GCT; 30°45.5'N, 117°05.5'W; sounding, 1070 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°.									
0	-	33.41E	5.32	0	18.8	33.41	5.32	23.88	404	0.00
10	18.37	33.37	5.42	10	18.37	33.37	5.42	23.96	396	0.04
25	-	33.35E	5.84	20	17.8	33.35	5.70	24.08	384	0.08
50	12.76	33.33E	5.30	30	15.4	33.34	5.85	24.63	332	0.11
74	-	33.36E	4.79	50	12.76	33.33	5.30	25.17	281	0.18
98	10.13	33.56E	4.06	75	11.0	33.36	4.78	25.52	247	0.24
151	8.97	33.93E	3.03	100	10.0	33.57	3.99	25.86	215	0.30
197	8.84	34.07E	2.46	150	9.00	33.93	3.03	26.30	173	0.40
292	8.10	34.32E	1.26	200	8.84	34.08	2.41	26.45	159	0.48
392	7.09	34.34E	0.64	250	8.50	34.22	1.74	26.61	144	0.56
486	6.34	34.33E	0.42	300	8.02	34.33	1.19	26.77	129	0.63
585	5.63	34.42E	0.30	400	7.00	34.34	0.62	26.92	114	0.76
781	4.69	34.45E	0.40	500	6.23	34.34	0.40	27.02	105	0.87
972	4.04	34.58E	0.60	600	5.53	34.42	0.30	27.18	90	0.98
1174	3.46	34.56E	0.87	700	5.02	34.44	0.32	27.25	83	1.07
				800	4.62	34.46	0.42	27.31	77	1.16
				1000	3.93	34.58	0.63	27.48	61	1.31

E Evaporation of salinity samples in storage (see Notes on Particular Cruises). For the RV Crest samples on Cruise 5110, it is estimated that the mean effect of evaporation was 0.057‰, with a standard deviation of 0.049‰.

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn.m

CREST; October 8, 1951; 0611 GCT; 30°25.5'N, 116°12'W; sounding, 800 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 03°. 107.32

0	-	33.49E	5.58	0	17.6	33.49	5.58	24.23	370	0.00
10	17.16	33.35	5.64	10	17.16	33.35	5.64	24.23	370	0.04
25	-	33.59E	5.00	20	15.0	33.46	5.30	24.81	315	0.07
49	13.30	33.79E	3.57	30	14.7	33.65	4.44	25.02	295	0.10
73	-	33.74E	3.30	50	13.2	33.79	3.55	25.44	255	0.16
97	11.68	33.71E	3.04	75	12.1	33.74	3.29	25.61	238	0.22
149	10.93	34.01E	1.56	100	11.62	33.71	2.98	25.70	230	0.28
195	9.98	34.16E	2.26	150	10.90	34.01	1.56	26.05	197	0.39
290	8.97	34.34E	1.08	200	9.90	34.18	2.26	26.34	169	0.48
390	7.29	34.29E	0.77	250	9.36	34.30	1.59	26.53	152	0.56
486	6.52	34.34E	0.47	300	8.85	34.34	1.01	26.65	140	0.64
586	5.95	34.45E	0.35	400	7.18	34.29	0.74	26.86	120	0.77
782	4.69	34.45E	0.40	500	6.43	34.35	0.43	27.01	106	0.89
975	3.84	34.53E	0.71	600	5.87	34.45	0.37	27.16	92	1.00
1178	3.34	34.58E	0.89	700	5.23	34.45	0.40	27.23	85	1.09
				800	4.59	34.46	0.41	27.32	77	1.18
				1000	3.77	34.54	0.75	27.46	63	1.33

CREST; October 8, 1951; 0830 GCT; 30°20'N, 116°23.5'W; sounding, 1500 fm; wind, 320°, force 1; weather, clear; sea, slight; wire angle, 07°. 107.35

0	-	33.51E	5.17	0	19.6	33.51	5.17	23.75	416	0.00
10	19.24	33.48	5.22	10	19.24	33.48	5.22	23.82	409	0.04
25	-	33.32E	5.67	20	18.2	33.35	5.39	23.99	393	0.08
50	14.78	33.30E	5.79	30	16.6	33.31	5.72	24.34	360	0.12
74	-	33.68E	3.98	50	14.78	33.30	5.79	24.73	322	0.19
98	12.08	33.78E	3.06	75	13.0	33.68	3.95	25.39	259	0.26
151	10.40	33.97E	2.57	100	12.00	33.79	3.02	25.67	233	0.32
197	9.04	34.06E	2.75	150	10.45	33.97	2.57	26.09	193	0.43
291	7.98	34.22E	1.53	200	9.00	34.06	2.75	26.41	163	0.52
390	7.28	34.30E	0.85	250	8.40	34.16	2.00	26.58	147	0.60
484	6.56	34.33E	0.50	300	7.89	34.23	1.46	26.71	134	0.67
584	5.88	34.36E	0.32	400	7.21	34.31	0.80	26.87	119	0.80
776	4.67	34.42E	0.40	500	6.45	34.34	0.46	27.00	107	0.92
969	3.92	34.59E	0.69	600	5.77	34.37	0.32	27.11	96	1.03
1169	3.36	34.60E	0.86	700	5.12	34.39	0.33	27.20	88	1.13
				800	4.53	34.44	0.42	27.31	77	1.22
				1000	3.83	34.60	0.72	27.50	59	1.37

CREST; October 8, 1951; 1147 GCT; 30°08'N, 116°48.5'W; sounding, 1500 fm; wind, 340°, force 1; weather, partly cloudy; sea, slight; wire angle, 01°. 107.40

0	-	33.52E	5.29	0	19.6	33.52	5.29	23.76	415	0.00
10	19.28	33.50	5.02	10	19.28	33.50	5.02	23.82	409	0.04
25	-	33.48E	5.43	20	19.0	33.49	5.09	23.90	402	0.08
51	14.52	33.24E	6.01	30	18.8	33.47	5.80	23.93	399	0.12
74	-	33.30E	5.02	50	14.7	33.24	6.01	24.70	325	0.19
98	10.54	33.51E	4.25	75	12.0	33.31	5.02	25.30	268	0.27
149	9.32	33.82E	3.19	100	10.47	33.53	4.20	25.76	224	0.33
197	8.58	34.02E	2.90	150	9.31	33.83	3.15	26.18	185	0.44
290	7.44	34.18E	1.93	200	8.52	34.03	2.88	26.46	158	0.52
391	6.66	34.21E	0.86	250	7.90	34.14	2.35	26.64	141	0.60
486	6.50	34.40E	0.58	300	7.35	34.18	1.83	26.75	131	0.67
585	5.61	34.39E	0.29	400	6.62	34.22	0.81	26.88	118	0.80
779	4.69	34.51E	0.38	500	6.43	34.40	0.53	27.05	102	0.91
971	4.07	34.50E	0.59	600	5.50	34.39	0.29	27.16	92	1.02
1173	3.48	34.58E	0.80	700	5.00	34.46	0.30	27.27	81	1.11
				800	4.60	34.51	0.38	27.36	73	1.19
				1000	3.98	34.51	0.63	27.42	67	1.35

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

110.33 CREST; October 8, 1951; 0133 GCT; 29°49.5'N, 115°52'W; sounding, 45 fm; wind, 340°, force 2; weather, partly cloudy; sea, slight; wire angle, 13°.

0	18.99	33.66E	5.49	0	18.99	33.66	5.49	24.02	390	0.00
10	17.98	33.59	5.65	10	17.98	33.59	5.65	24.22	371	0.04
24	16.66	33.60E	5.54	20	17.01	33.59	5.60	24.45	349	0.07
48	15.36	33.83E	3.94	30	16.20	33.64	4.85	24.68	327	0.11
73	14.56	33.88E	3.60	50	15.28	33.84	3.90	25.04	293	0.17
				75	(14.52)	(33.88)	(3.58)	(25.24)	(274)	(0.24)

110.35 CREST; October 7, 1951; 2315 GCT; 29°47'N, 115°57.5'W; sounding, 680 fm; wind, 360°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°.

0	-	33.50E	5.51	0	18.6	33.50	5.51	24.00	392	0.00
10	16.86	33.49	5.60	10	16.86	33.49	5.60	24.41	353	0.04
25	-	33.62E	5.30	20	16.7	33.57	5.53	24.51	343	0.07
50	13.98	33.78E	3.81	30	15.3	33.65	4.79	24.89	307	0.10
74	-	33.86E	3.05	50	13.98	33.78	3.81	25.27	271	0.16
98	11.96	33.91E	2.32	75	12.5	33.86	3.05	25.63	237	0.23
150	10.92	33.87E	1.84	100	11.92	33.91	2.29	25.79	222	0.28
197	10.66	34.24E	1.74	150	10.92	33.87	1.84	25.93	208	0.39
291	9.09	34.37E	0.99	200	10.63	34.24	1.73	26.27	176	0.49
388	7.81	34.45E	0.64	250	10.00	34.37	1.34	26.48	156	0.58
483	6.52	34.39E	0.41	300	8.94	34.38	0.93	26.67	139	0.65
583	5.90	34.42E	0.31	400	7.60	34.45	0.62	26.92	114	0.78
677	5.29	34.42E	0.44	500	6.40	34.39	0.38	27.04	103	0.90
777	4.66	34.57uE	0.42	600	5.80	34.42	0.33	27.14	93	1.00
973	3.91	34.53E	0.64	700	5.12	34.42	0.44	27.23	85	1.10
				800	4.54	34.45	0.43	27.32	77	1.18
				1000	(3.85)	(34.54)	(0.64)	(27.46)	(63)	(1.34)

110.40 CREST; October 7, 1951; 1946 GCT; 29°36'N, 116°22'W; sounding, 1270 fm; wind, 300°, force 1; weather, partly cloudy; sea, slight; wire angle, 05°.

0	-	33.43E	5.33	0	18.9	33.43	5.33	23.87	404	0.00
10	17.86	33.44	5.47	10	17.86	33.44	5.47	24.13	379	0.04
25	-	33.40E	5.49	20	17.7	33.41	5.49	24.15	378	0.08
49	14.83	33.45E	5.13	30	17.7	33.40	5.45	24.17	376	0.11
74	-	33.65E	3.68	50	14.8	33.46	5.11	24.85	311	0.18
99	13.05	33.96E	2.71	75	12.7	33.66	3.68	25.44	255	0.25
150	10.68	34.14E	1.98	100	12.90	33.97	2.70	25.64	236	0.32
196	9.46	34.19E	1.78	150	10.68	34.14	1.98	26.19	184	0.42
292	8.63	34.28E	1.19	200	9.40	34.19	1.76	26.44	160	0.51
390	6.82	34.23E	1.13	250	8.92	34.24	1.50	26.56	149	0.59
485	6.82	34.39E	0.35	300	8.58	34.28	1.16	26.65	140	0.66
586	5.80	34.42E	0.31	400	6.79	34.24	1.10	26.87	119	0.80
781	4.74	34.49E	0.35	500	6.72	34.40	0.32	27.01	106	0.92
971	4.09	34.54E	-	600	5.68	34.42	0.31	27.16	92	1.02
1172	3.45	34.64E	-	700	5.08	34.46	0.31	27.26	82	1.12
				800	4.67	34.50	(0.35)	27.34	74	1.20
				1000	3.99	34.55		27.45	64	1.35

OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

CREST; October 7, 1951; 1357 GCT; 29°13'N, 117°06'W; sounding, 2030 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°. 110.50

0	-	33.66E	5.21	0	19.5	33.66	5.21	23.79	412	0.00
10	19.40	33.50	5.18	10	19.40	33.50	5.18	23.80	411	0.04
25	-	33.62E	5.23	20	19.2	33.59	5.20	23.92	400	0.08
49	15.90	33.32E	5.81	30	19.1	33.59	5.29	23.95	397	0.12
73	-	33.36E	5.74	50	15.8	33.32	5.81	24.53	342	0.20
97	11.93	33.65E	5.05	75	13.6	33.38	5.73	25.04	293	0.28
149	9.67	33.91E	3.05	100	11.78	33.66	4.79	25.61	239	0.34
196	9.10	34.01E	2.68	150	9.64	33.91	3.05	26.19	184	0.45
292	8.34	34.34E	1.23	200	9.06	34.02	2.64	26.36	167	0.54
393	7.88	34.41E	0.46	250	8.65	34.19	1.98	26.57	148	0.62
486	6.91	34.42E	0.33	300	8.30	34.35	1.12	26.75	131	0.69
586	6.06	34.44E	0.43	400	7.83	34.41	0.45	26.86	120	0.82
783	4.81	34.43E	0.36	500	6.77	34.42	0.35	27.02	105	0.94
972	4.08	34.45E	0.56	600	5.94	34.44	0.43	27.14	93	1.05
1172	3.60	34.54E	0.74	700	5.25	34.43	0.40	27.22	86	1.14
				800	4.73	34.43	0.38	27.27	81	1.23
				1000	3.98	34.46	0.60	27.38	71	1.40

CREST; October 7, 1951; 0848 GCT; 28°53.5'N, 117°45.5'W; sounding, 2100 fm; wind, 330°, force 2; weather, clear; sea, moderate; wire angle, 07°. 110.60

0	19.37	33.50E	5.23	0	19.37	33.50	5.23	23.80	411	0.00
10	-	33.52	5.06	10	19.3	33.52	5.06	23.84	407	0.04
25	19.27	33.58E	5.27	20	19.3	33.56	5.15	23.86	405	0.08
73	-	33.32E	5.77	30	19.1	33.58	5.35	23.93	398	0.12
97	12.06	33.36E	5.17	50	16.9	33.46	5.60	24.38	356	0.20
148	9.96	33.80E	3.35	75	14.0	33.32	5.77	24.91	305	0.28
194	9.33	34.08E	2.52	100	11.86	33.38	5.00	25.38	261	0.35
288	9.18	34.47E	0.74	150	9.90	33.82	3.28	26.07	195	0.47
384	8.15	34.46E	0.41	200	9.32	34.11	2.44	26.39	165	0.56
478	7.42	34.47E	0.31	250	9.21	34.35	1.50	26.60	145	0.64
575	6.38	34.40E	0.39	300	9.10	34.47	0.66	26.71	134	0.71
766	5.17	34.50E	0.35	400	8.00	34.46	0.40	26.87	119	0.84
956	4.38	34.55E	0.47	500	7.22	34.47	0.32	26.98	108	0.96
1159	3.66	34.56E	0.73	600	6.18	34.40	0.39	27.08	99	1.07
				700	5.53	34.44	0.37	27.21	87	1.17
				800	5.00	34.52	0.37	27.31	77	1.26
				1000	4.21	34.56	0.52	27.44	65	1.42

CREST; October 6, 1951; 1341 GCT; 29°12'N, 115°03'W; sounding, 52 fm; wind, 330°, force 3; weather, partly cloudy; sea, slight; wire angle, 00°. 115.27

0	19.38	33.86E	5.09	0	19.38	33.86	5.09	24.07	385	0.00
10	19.16	33.83	5.11	10	19.16	33.83	5.11	24.10	382	0.04
25	18.22	33.78E	5.14	20	18.63	33.80	5.14	24.22	371	0.08
50	17.02	34.18E	3.29	30	18.00	33.77	5.10	24.36	358	0.11
75	13.42	33.71E	4.02	50	17.02	34.18	3.29	24.90	306	0.18
				75	13.42	33.71	4.02	25.34	265	0.25

CREST; October 6, 1951; 1501 GCT; 29°08'N, 115°11'W; sounding, 55 fm; wind, 300°, force 3; weather, partly cloudy; sea, slight; wire angle, 00°. 115.30

0	18.88	33.79E	5.28	0	18.88	33.79	5.28	24.14	378	0.00
10	18.88	33.71	5.23	10	18.88	33.71	5.23	24.08	384	0.04
25	18.76	33.78E	5.25	20	18.82	33.77	5.25	24.14	378	0.08
50	15.72	33.78E	4.56	30	18.55	33.78	5.21	24.22	371	0.11
75	13.82	34.04E	3.15	50	15.72	33.78	4.56	24.89	307	0.18
				75	13.82	34.04	3.15	25.50	249	0.25

OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m

115.35 CREST; October 6, 1951; 1751 GCT; 28°55'N, 115°27.5'W; sounding, 570 fm; wind, 320°, force 3; weather, missing; sea, moderate; wire angle, 13°.

0	-	33.88E	5.15	0	20.5	33.88	5.15	23.80	411	0.00
10	19.90	33.75	5.18	10	19.90	33.75	5.18	23.85	406	0.04
24	-	33.72E	5.43	20	19.5	33.73	5.40	23.95	397	0.08
48	15.33	33.58E	5.38	30	18.9	33.69	5.43	24.07	385	0.12
72	-	33.66E	4.00	50	15.2	33.58	5.31	24.86	310	0.19
95	11.42	33.81E	2.58	75	12.6	33.67	3.80	25.46	253	0.26
146	11.80	34.48E	1.27	100	11.44	33.86	2.34	25.83	218	0.32
191	10.90	34.47E	1.12	150	11.79	34.48	1.24	26.25	178	0.42
282	9.41	34.52E	1.02	200	10.75	34.47	1.12	26.43	161	0.51
376	8.35	34.42E	0.81	250	9.91	34.51	1.08	26.61	144	0.58
468	6.88	34.42E	1.09	300	9.20	34.51	0.99	26.72	133	0.66
564	5.86	34.43E	0.29	400	8.13	34.42	0.85	26.82	124	0.79
657	5.29	34.48E	0.33	500	6.44	34.42	0.92	27.06	101	0.91
755	4.82	34.52E	0.38	600	5.61	34.45	0.30	27.19	89	1.01
950	3.85	34.53E	0.64	700	5.08	34.50	0.33	27.29	79	1.10
				800	4.60	34.53	0.40	27.38	71	1.18
				1000	(3.63)	(34.53)	(0.64)	(27.47)	(62)	(1.32)

115.40 CREST; October 6, 1951; 2126 GCT; 28°45'N, 115°47'W; sounding, 610 fm; wind, 320°, force 3; weather, missing; sea, rough; wire angle, 16°.

0	-	33.76E	5.34	0	19.6	33.76	5.34	23.95	397	0.00
10	18.98	33.66	5.36	10	18.98	33.66	5.36	24.02	390	0.04
24	-	33.63E	5.40	20	18.8	33.64	5.39	24.05	387	0.08
48	13.34	33.48E	5.43	30	18.4	33.60	5.41	24.12	380	0.12
72	-	33.41E	4.48	50	13.2	33.47	5.41	25.19	279	0.18
94	10.69	33.78E	3.55	75	11.5	33.41	4.38	25.47	252	0.25
142	11.60	34.43E	1.43	100	10.70	33.87	3.26	25.97	205	0.31
185	11.23	34.54E	0.88	150	11.60	34.47	1.28	26.27	176	0.40
273	9.58	34.47E	0.71	200	11.00	34.53	0.80	26.43	161	0.49
365	8.06	34.64uE	0.64	250	10.06	34.49	0.71	26.56	149	0.57
455	7.03	34.44E	0.39	300	9.09	34.45	0.70	26.70	135	0.64
549	6.58	34.52E	0.27	400	7.61	34.44	0.56	26.91	115	0.77
641	5.76	34.47E	0.29	500	6.79	34.47	0.30	27.06	101	0.89
738	4.97	34.53E	0.36	600	6.18	34.49	0.28	27.16	92	0.99
929	4.10	34.54E	0.58	700	5.24	34.51	0.32	27.28	80	1.08
				800	4.63	34.54	0.40	27.38	71	1.16
				1000	(3.83)	(34.54)		(27.46)	(63)	(1.31)

120.25 CREST; October 6, 1951; 0630 GCT; 28°23'N, 114°15'W; sounding, 31 fm; wind, 320°, force 4; weather, partly cloudy; sea, moderate; wire angle, 05°.

0	20.54	33.83E	5.18	0	20.54	33.83	5.18	23.75	416	0.00
10	20.56	33.78	5.19	10	20.56	33.78	5.19	23.70	420	0.04
25	19.63	33.76E	5.15	20	20.30	33.77	5.18	23.77	414	0.08
50	17.11	33.68E	3.96	30	18.40	33.75	5.06	24.24	369	0.12
				50	17.11	33.68	3.96	24.49	345	0.19

120.30 CREST; October 6, 1951; 0344 GCT; 28°13'N, 114°34'W; sounding, 54 fm; wind, 320°, force 4; weather, partly cloudy; sea, slight; wire angle, 03°.

0	20.76	33.86E	5.08	0	20.76	33.86	5.08	23.72	419	0.00
10	20.76	33.87	5.14	10	20.76	33.87	5.14	23.72	419	0.04
25	20.74	33.86E	5.09	20	20.75	33.87	5.13	23.73	418	0.08
50	19.45	33.68E	4.91	30	20.74	33.84	5.07	23.70	420	0.13
75	15.92	33.73E	4.53	50	19.45	33.68	4.91	23.92	400	0.21
				75	15.92	33.73	4.53	24.81	315	0.30

120.35 CREST; October 6, 1951; 0109 GCT; 28°04'N, 114°54'W; sounding, 47 fm; wind, 350°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°.

0	20.89	33.92E	5.08	0	20.89	33.92	5.08	23.71	419	0.00
10	20.86	33.89	5.10	10	20.86	33.89	5.10	23.70	420	0.04
25	20.74	33.92E	5.17	20	20.80	33.91	5.15	23.74	417	0.08
49	20.34	33.86E	5.10	30	20.70	33.92	5.17	23.78	413	0.13
74	16.50	33.84E	4.29	50	20.31	33.86	5.08	23.83	408	0.21
				75	(16.48)	(33.84)	(4.21)	(24.77)	(319)	(0.30)

OBSERVED				INTERPOLATED				COMPUTED			SIO
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_T	ΔD	CCOFI
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	dyn. m	5110
CREST; October 5, 1951; 1944 GCT; 27°40.5'N, 115°34'W; sounding, 1650 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 10°.											120.45
0	-	34.11E	4.81	0	23.2	34.11	4.81	23.22	466	0.00	
10	23.16	34.07	4.94	10	23.16	34.07	4.94	23.20	468	0.05	
25	-	33.99E	5.23	20	23.0	34.02	5.12	23.21	467	0.09	
49	14.95	33.49E	5.52	30	20.0	33.94	5.29	23.98	394	0.14	
73	-	33.62E	4.38	50	14.9	33.49	5.52	24.85	311	0.21	
96	12.33	33.97E	2.91	75	12.3	33.64	4.33	25.50	250	0.28	
147	9.98	33.99E	2.46	100	12.32	33.98	2.84	25.76	225	0.34	
194	10.19	34.42E	1.43	150	9.98	34.00	2.42	26.20	183	0.44	
287	9.40	34.58E	0.50	200	10.17	34.44	1.34	26.52	153	0.53	
386	7.84	34.42E	0.47	250	9.80	34.56	0.73	26.66	139	0.60	
480	6.93	34.42E	0.31	300	9.22	34.57	0.48	26.77	129	0.67	
577	6.10	34.42E	0.19	400	7.68	34.42	0.47	26.89	117	0.80	
771	4.90	34.48E	0.33	500	6.75	34.42	0.28	27.02	105	0.92	
962	4.06	34.51E	0.60	600	5.91	34.42	0.19	27.12	95	1.02	
1162	3.54	34.55E	0.75	700	5.27	34.46	0.27	27.24	84	1.12	
				800	4.78	34.49	0.40	27.32	76	1.20	
				1000	3.95	34.52	0.62	27.43	66	1.36	
CREST; October 5, 1951; 1557 GCT; 27°31'N, 115°52.5'W; sounding, 2300 fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 05°.											120.50
0	-	34.31E	4.81	0	22.0	34.31	4.81	23.70	420	0.00	
10	22.04	34.22	4.91	10	22.04	34.22	4.91	23.63	427	0.04	
25	-	34.42E	4.91	20	22.1	34.36	4.91	23.72	418	0.08	
50	17.35	33.69E	5.64	30	21.7	34.40	4.96	23.86	405	0.13	
74	-	33.70E	5.45	50	17.35	33.69	5.64	24.45	349	0.20	
98	12.09	33.68E	4.39	75	14.6	33.70	5.40	25.08	289	0.28	
149	10.25	34.01E	2.50	100	11.92	33.69	4.21	25.61	239	0.35	
195	10.06	34.36E	1.48	150	10.25	34.02	2.46	26.17	186	0.46	
290	8.90	34.55E	0.81	200	10.03	34.38	1.42	26.48	156	0.54	
389	8.00	34.52E	0.33	250	9.49	34.51	1.05	26.68	137	0.62	
484	7.01	34.53E	0.22	300	8.79	34.55	0.76	26.82	124	0.69	
582	6.14	34.47E	0.21	400	7.89	34.52	0.31	26.94	113	0.81	
776	4.77	34.49E	0.35	500	6.89	34.52	0.22	27.08	99	0.92	
966	4.14	34.61E	0.52	600	6.00	34.47	0.22	27.16	92	1.02	
1167	3.48	34.65E	0.79	700	5.31	34.48	0.27	27.25	83	1.12	
				800	4.75	34.50	0.38	27.34	75	1.20	
				1000	4.03	34.62	0.55	27.50	59	1.35	
CREST; October 5, 1951; 1011 GCT; 27°13'N, 116°32'W; sounding, 2200 fm; wind, 340°, force 2; weather, overcast; sea, rough; wire angle, 17°.											120.60
0	-	33.68E	4.94	0	20.7	33.68	4.94	23.59	431	0.00	
9	20.72	33.55	4.96	10	20.7	33.55	4.96	23.50	440	0.04	
23	-	33.60E	5.17	20	20.6	33.60	5.07	23.56	434	0.09	
47	14.40	33.38E	5.83	30	19.5	33.57	5.50	23.82	409	0.13	
70	-	33.61E	4.60	50	14.2	33.38	5.81	24.92	304	0.20	
94	10.85	33.79E	3.66	75	13.2	33.65	4.37	25.33	265	0.27	
143	9.92	34.06E	2.47	100	10.62	33.82	3.50	25.94	207	0.33	
188	9.93	34.44E	1.65	150	9.92	34.11	2.33	26.29	174	0.43	
279	8.99	34.52E	1.05	200	9.85	34.47	1.53	26.58	146	0.51	
374	8.24	34.53E	0.42	250	9.29	34.51	1.21	26.71	134	0.58	
465	7.30	34.49E	0.30	300	8.79	34.53	0.90	26.81	125	0.65	
560	6.40	34.51E	0.31	400	8.01	34.52	0.33	26.91	115	0.77	
745	5.09	34.58E	0.30	500	6.94	34.49	0.30	27.05	102	0.89	
928	4.32	34.53E	0.50	600	6.08	34.52	0.31	27.19	89	0.99	
1126	3.76	34.67E	0.66	700	5.35	34.56	0.31	27.31	77	1.08	
				800	4.82	34.56	0.34	27.37	72	1.16	
				1000	4.11	34.56	0.58	27.45	64	1.31	

SIO
CCOFI
5110

OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
120.70	CREST; October 5, 1951; 0422 GCT; 26°52.5'N, 117°10'W; sounding, 2200 fm; wind, 320°, force 3; weather, overcast; sea, very rough; wire angle, 08°.									
0	-	33.72E	5.15	0	20.3	33.72	5.15	23.73	418	0.00
10	20.24	33.56	5.14	10	20.24	33.56	5.14	23.62	428	0.04
25	-	33.67E	5.15	20	20.2	33.64	5.14	23.70	421	0.08
49	18.70	33.74E	5.52	30	20.1	33.70	5.20	23.77	414	0.13
73	-	33.43E	5.83	50	18.6	33.74	5.52	24.18	375	0.21
96	14.14	33.52E	5.56	75	16.0	33.43	5.83	24.57	338	0.29
147	11.05	33.90E	3.71	100	13.88	33.55	5.42	25.11	286	0.38
193	10.43	34.22E	1.95	150	10.98	33.92	3.59	25.97	205	0.50
288	9.38	34.54E	0.95	200	10.34	34.25	1.82	26.33	170	0.60
385	8.56	34.68E	0.44	250	9.80	34.45	1.22	26.58	147	0.68
481	7.44	34.62E	0.27	300	9.25	34.56	0.87	26.76	130	0.75
580	6.46	34.54E	0.24	400	8.42	34.68	0.40	26.98	109	0.88
774	5.18	34.58E	0.31	500	7.26	34.60	0.25	27.09	98	0.98
964	4.24	34.62E	0.52	600	6.30	34.54	0.24	27.18	90	1.08
1165	3.74	34.65E	0.67	700	5.61	34.56	0.28	27.28	80	1.18
				800	5.03	34.58	0.32	27.36	73	1.26
				1000	4.13	34.63	0.58	27.50	59	1.40
120.80	CREST; October 4, 1951; 2218 GCT; 26°32.5'N, 117°48.5'W; sounding, 2200 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 03°.									
0	-	34.02E	5.01	0	22.2	34.02	5.01	23.43	446	0.00
10	22.19	34.00	4.97	10	22.19	34.00	4.97	23.42	447	0.04
25	-	33.96E	4.94	20	22.0	33.97	4.95	23.45	444	0.09
55	21.52	33.94E	5.05	30	21.9	33.96	4.95	23.49	441	0.13
79	-	33.67E	5.51	50	21.6	33.94	5.00	23.54	436	0.22
108	11.48	33.74E	3.80	75	15.0	33.68	5.50	24.98	299	0.31
160	11.50	34.42E	0.78	100	13.2	33.71	4.14	25.38	261	0.38
212	10.04	34.41E	1.78	150	11.52	34.33	0.89	26.18	185	0.50
317	8.09	34.26E	1.11	200	10.37	34.42	1.69	26.46	158	0.58
427	7.12	34.41E	0.49	250	9.25	34.35	1.62	26.59	146	0.66
531	6.54	34.50E	0.75	300	8.32	34.27	1.25	26.67	138	0.74
635	5.84	34.48E	0.26	400	7.33	34.37	0.60	26.90	116	0.87
839	4.80	34.49E	0.39	500	6.71	34.49	0.71	27.08	99	0.98
1045	4.11	34.56E	0.58	600	6.09	34.49	0.35	27.17	91	1.08
1247	3.56	34.51E	0.76	700	5.45	34.48	0.27	27.23	85	1.18
				800	4.96	34.48	0.33	27.29	79	1.27
				1000	4.22	34.55	0.53	27.43	66	1.43
120.90	CREST; October 4, 1951; 1657 GCT; 26°11'N, 118°27.5'W; sounding, 2000 fm; wind, 350°, force 4; weather, cloudy; sea, rough; wire angle, 19°.									
0	-	33.83E	4.76	0	21.8	33.83	4.76	23.41	448	0.00
9	21.78	33.84	5.01	10	21.7	33.84	5.01	23.44	445	0.04
23	-	33.93E	4.95	20	21.6	33.92	4.98	23.53	437	0.09
51	17.98	33.54E	5.65	30	21.4	33.91	4.97	23.58	432	0.13
74	-	33.62E	5.53	50	18.0	33.54	5.65	24.18	375	0.21
102	12.53	33.55E	4.85	75	15.7	33.62	5.53	24.78	318	0.30
151	10.16	33.90E	3.68	100	12.6	33.55	4.91	25.37	261	0.37
201	9.42	34.25E	1.98	150	10.21	34.89	3.70	26.07	195	0.49
300	8.37	34.46E	0.74	200	9.48	34.24	2.04	26.47	157	0.58
405	7.09	34.37E	0.46	250	8.89	34.41	1.10	26.69	136	0.65
506	6.36	34.47E	0.32	300	8.37	34.46	0.74	26.82	124	0.72
606	5.64	34.44E	0.27	400	7.13	34.37	0.47	26.92	114	0.85
805	4.87	34.54E	0.29	500	6.41	34.47	0.33	27.10	97	0.96
1005	4.11	34.56E	0.54	600	5.67	34.44	0.28	27.17	91	1.06
1204	3.56	34.64E	0.74	700	5.22	34.48	0.28	27.26	82	1.15
				800	4.88	34.54	0.29	27.34	74	1.23
				1000	4.13	34.56	0.53	27.45	64	1.39

OBSERVED				INTERPOLATED				COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	

CREST; September 30, 1951; 1527 GCT; 27°24'N, 114°39.5'W; sounding, 41 fm; wind, 080°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°. 123.37

0	24.54	34.46E	4.67	0	24.54	34.46	4.67	23.09	479	0.00	
10	24.50	34.36	4.59	10	24.50	34.36	4.59	23.02	485	0.05	
25	23.08	34.40E	4.69	20	23.90	34.40	4.67	23.24	464	0.10	
50	17.39	33.94E	4.67	30	21.61	34.38	4.69	23.87	404	0.14	
				50	17.39	33.94	4.67	24.63	332	0.21	

CREST; September 30, 1951; 1748 GCT; 27°19'N, 114°52'W; sounding, 860 fm; wind, 340°, force 3; weather, partly cloudy; sea, slight; wire angle, 06°. 123.40

0	-	34.04E	4.81	0	23.5	34.04	4.81	22.99	488	0.00	
10	23.36	33.98	4.80	10	23.36	33.98	4.80	23.08	480	0.05	
25	-	34.02E	4.94	20	23.2	34.00	4.87	23.14	474	0.10	
49	17.09	33.69E	5.71	30	22.0	34.00	5.23	23.48	442	0.14	
73	-	33.72E	4.68	50	17.0	33.69	5.71	24.53	342	0.22	
97	12.90	33.96E	3.03	75	13.8	33.72	4.68	25.26	272	0.30	
				100	(12.8)	(33.99)	(2.89)	(25.67)	(233)	(0.36)	

CREST; September 30-October 1, 1951; 2303, 0108 GCT; 26°58'N, 115°30.5'W; sounding, 1850 fm; wind, 340°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°, 06°. 123.50

0	-	33.90E	5.06	0	21.7	33.90	5.06	23.49	441	0.00	
10	20.96	33.77	5.05	10	20.96	33.77	5.05	23.59	431	0.04	
25	-	33.82E	5.20	20	20.9	33.81	5.14	23.64	426	0.09	
50	14.28	33.31E	5.66	30	18.0	33.64	5.36	24.25	368	0.13	
74	-	33.61E	4.56	50	14.28	33.31	5.66	24.85	311	0.19	
98	10.98	33.69E	4.00	75	11.9	33.61	4.55	25.55	244	0.26	
151	9.96	34.11E	2.64	100	10.9	33.70	3.95	25.80	220	0.32	
198	9.83	34.42E	1.39	150	9.95	34.10	2.66	26.28	175	0.42	
293	9.02	34.51E	0.52	200	9.82	34.43	1.34	26.56	149	0.50	
394	7.92	34.52E	0.30	250	9.42	34.49	0.78	26.67	138	0.58	
488	7.03	34.52E	0.19	300	8.95	34.51	0.51	26.77	129	0.65	
				400	7.85	34.52	0.29	26.95	112	0.77	
582	6.59	-	-	500	6.97	(34.52)	(0.20)	(27.07)	(100)	(0.88)	
773	5.10	34.55E	0.28	600	6.48	(34.53)	(0.21)	(27.14)	(93)	(0.99)	
965	4.38	34.56E	0.43	700	5.69	(34.54)	(0.25)	(27.25)	(83)	(1.08)	
1171	3.76	34.64E	0.60	800	4.98	34.55	0.31	27.34	74	(1.17)	
				1000	4.28	34.57	0.47	27.44	65	(1.32)	

CREST; October 1, 1951; 1528 GCT; 26°55.5'N, 114°06'W; sounding, 48 fm; wind, 010°, force 2; weather, clear; sea, slight; wire angle, 03°. 127.34

0	24.91	34.50E	4.74	0	24.91	34.50	4.74	23.01	486	0.00	
10	24.90	34.42	4.72	10	24.90	34.42	4.72	22.95	492	0.05	
25	24.50	34.39E	4.78	20	24.74	34.40	4.74	22.99	488	0.10	
49	19.19	34.10E	4.97	30	23.80	34.36	4.82	23.23	465	0.15	
75	18.40	34.10E	4.29	50	19.18	34.10	4.97	24.31	362	0.23	
				75	18.40	34.10	4.29	24.50	344	0.32	

CREST; October 1, 1951; 1204 GCT; 26°45'N, 114°30'W; sounding, 1850 fm; wind, 360°, force 1; weather, clear; sea, smooth; wire angle, 05°. 127.40

0	-	-	4.75	0	23.9	34.13	4.75	22.95	492	0.00	
10	23.74	34.13	4.72	10	23.74	34.13	4.72	23.07	480	0.05	
25	-	33.52E	5.15	20	22.2	33.96	4.90	23.39	450	0.10	
49	15.46	33.44E	5.75	30	17.1	33.49	5.49	24.36	358	0.14	
74	-	33.66E	4.72	50	15.4	33.44	5.75	24.70	325	0.20	
98	12.53	33.94E	3.09	75	13.6	33.66	4.70	25.26	272	0.28	
150	12.58	34.64E	0.53	100	12.52	33.96	2.93	25.70	230	0.34	
196	11.47	34.67E	0.40	150	12.58	34.64	0.53	26.22	181	0.45	
290	10.48	34.67E	0.29	200	11.40	34.67	0.40	26.47	157	0.53	
390	8.45	34.53E	0.36	250	10.88	34.67	0.33	26.56	149	0.61	
485	7.30	34.47E	0.22	300	10.28	34.66	0.30	26.66	139	0.69	
585	6.28	34.50E	0.18	400	8.31	34.52	0.33	26.87	119	0.82	
779	5.06	34.55E	0.29	500	7.13	34.47	0.21	27.01	106	0.94	
972	4.31	34.59E	0.43	600	6.15	34.50	0.18	27.17	91	1.04	
1173	3.57	34.66E	0.71	700	5.50	34.53	0.22	27.27	81	1.14	
				800	4.96	34.55	0.32	27.34	74	1.22	
				1000	4.22	34.59	0.48	27.46	63	1.37	

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OBSERVED				INTERPOLATED				COMPUTED		
Z	T	S	O_2	Z	T	S	O_2	σ_t	δ_{T_3}	ΔD
m	°C	‰	ml/L	m	°C	‰	ml/L	g/L	10^{-5} cm/g	dyn. m
127.50	CREST; October 1, 1951; 0600 GCT; 26°24'N, 115°07.5'W; sounding, 2300 fm; wind, 340°, force 2; weather, clear; sea, slight; wire angle, 05°.									
0	-	34.05E	4.67	0	23.6	34.05	4.67	23.07	481	0.00
10	23.44	34.00	4.61	10	23.44	34.00	4.61	23.07	481	0.05
25	-	34.16E	5.23	20	23.4	34.12	5.02	23.17	471	0.10
49	14.35	33.64E	5.47	30	18.4	34.14	5.34	24.54	341	0.14
72	-	33.91E	3.44	50	14.3	33.64	5.46	25.10	287	0.20
96	12.08	34.14E	1.88	75	13.2	33.93	3.05	25.54	245	0.27
148	11.50	34.49E	0.88	100	12.00	34.17	1.75	25.97	205	0.32
194	11.30	34.65E	0.43	150	11.49	34.50	0.82	26.31	172	0.42
287	9.68	34.57E	0.51	200	11.24	34.65	0.43	26.48	156	0.50
386	8.21	34.47E	0.48	250	10.38	34.61	0.48	26.61	144	0.58
481	7.38	34.50E	0.33	300	9.44	34.55	0.50	26.71	134	0.65
579	6.46	34.47E	0.26	400	8.04	34.47	0.46	26.87	119	0.78
772	5.24	34.63E	0.29	500	7.20	34.50	0.31	27.02	105	0.90
960	4.34	34.62E	0.46	600	6.31	34.48	0.26	27.12	95	1.00
1157	3.66	34.60E	0.72	700	5.65	34.57	0.28	27.27	81	1.10
				800	5.11	34.63	0.32	27.39	70	1.18
				1000	4.21	34.62	0.52	27.48	61	1.32
130.30	CREST; October 3, 1951; 0214 GCT; 26°29'N, 113°29'W; sounding, 40 fm; wind, 300°, force 4; weather, clear; sea, rough; wire angle, 06°.									
0	25.53	34.70E	4.64	0	25.53	34.70	4.64	22.97	490	0.00
10	25.54	34.68	4.64	10	25.54	34.68	4.64	22.96	491	0.05
25	23.22	34.54E	4.75	20	24.50	34.59	4.71	23.20	468	0.10
50	21.69	34.49E	3.86	30	22.72	34.53	4.71	23.57	423	0.14
				50	21.69	34.49	3.86	23.94	398	0.22
130.35	CREST; October 3, 1951; 0514 GCT; 26°24'N, 113°49'W; sounding, 145 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 21°.									
0	25.72	34.67E	4.58	0	25.72	34.67	4.58	22.90	497	0.00
9	25.72	34.65	4.61	10	25.72	34.64	4.61	22.88	499	0.05
23	25.65	34.70Ea)	4.59	20	25.69	34.69	4.61	22.92	495	0.10
46	18.28	34.27Ea)	4.09	30	22.60	34.69	4.52	23.83	408	0.14
69	15.60	34.16E	2.82	50	17.60	34.22	3.71	24.80	316	0.22
90	14.95	34.20E	2.59	75	15.39	34.16	2.75	25.26	272	0.29
141	13.40	34.54E	0.78	100	14.69	34.27	2.42	25.50	249	0.36
188	12.18	34.64E	0.51	150	13.14	34.57	0.69	26.05	197	0.47
237	11.36	34.66E	0.28	200	11.93	34.65	0.45	26.35	168	0.56
130.40	CREST; October 3, 1951; 0832 GCT; 26°16'N, 114°10'W; sounding, 1140 fm; wind, 320°, force 4; weather, clear; sea, rough; wire angle, 21°.									
0	-	34.62E	4.61	0	25.8	34.62	4.61	22.84	503	0.00
9	25.60	34.60	4.61	10	25.6	34.60	4.61	22.88	499	0.05
23	-	33.99E	5.01	20	22.9	34.10	4.90	23.30	459	0.10
51	15.89	33.59E	5.39	30	21.0	33.84	5.14	23.63	427	0.14
74	-	33.82E	4.47	50	15.9	33.59	5.39	24.70	325	0.22
100	13.50	34.02E	3.10	75	14.4	33.82	4.40	25.22	276	0.29
150	12.76	34.55E	0.95	100	13.50	34.02	3.10	25.55	244	0.36
198	11.74	34.57E	0.71	150	12.76	34.55	0.95	26.11	191	0.47
296	10.32	34.60E	0.36	200	11.71	34.57	0.70	26.33	170	0.56
398	7.91	34.44E	0.32	250	11.00	34.59	0.53	26.48	156	0.64
495	6.76	34.46E	0.28	300	10.25	34.60	0.35	26.62	143	0.72
594	5.86	34.51E	0.22	400	7.87	34.44	0.32	26.88	118	0.86
788	4.77	34.50E	0.33	500	6.70	34.46	0.28	27.06	101	0.97
987	3.96	34.54E	0.57	600	5.81	34.51	0.22	27.21	87	1.07
1188	3.49	34.60E	0.72	700	5.22	34.51	0.27	27.28	80	1.16
				800	4.72	34.50	0.35	27.34	75	1.25
				1000	3.92	34.55	0.57	27.46	63	1.40

a) Salinity samples at 23 and 46 meters appear to have been reversed; they are assumed to be listed in correct order.

OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

CREST; October 3, 1951; 1418 GCT; 25°55'N, 114°48.5'W; sounding, 2100 fm; wind, 330°, force 4; weather, partly cloudy; sea, rough; wire angle, 25°. 130.50

0	-	34.17E	4.74	0	23.9	34.17	4.74	23.07	481	0.00
9	23.89	34.13	4.71	10	23.8	34.12	4.71	23.06	482	0.05
23	-	33.99E	5.12	20	22.3	34.01	5.10	23.40	449	0.09
51	13.87	33.94E	3.44	30	18.4	33.97	5.09	24.41	353	0.13
72	-	33.93E	2.76	50	13.9	33.94	3.50	25.40	258	0.20
100	11.11	33.97E	2.47	75	12.0	33.93	2.74	25.78	222	0.26
148	10.26	34.23E	1.69	100	11.11	33.97	2.47	25.97	204	0.31
196	9.70	34.35E	1.37	150	10.21	34.23	1.66	26.33	170	0.41
293	8.96	34.42	0.47	200	9.65	34.35	1.34	26.53	152	0.49
396	7.65	34.45	0.33	250	9.26	34.40	0.89	26.63	142	0.56
494	6.64	34.40	0.28	300	8.90	34.42	0.43	26.70	135	0.63
595	5.89	34.42	0.26	400	7.60	34.45	0.33	26.92	114	0.76
787	4.85	34.48	0.34	500	6.59	34.40	0.28	27.03	104	0.88
993	4.04	34.52	0.56	600	5.86	34.42	0.26	27.13	94	0.98
1194	3.46	34.56	0.81	700	5.28	34.45	0.28	27.23	85	1.08
				800	4.79	34.48	0.37	27.31	77	1.16
				1000	4.03	34.52	0.58	27.42	67	1.32

CREST; October 3, 1951; 1946 GCT; 25°31'N, 115°26'W; sounding, 2200 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 18°. 130.60

0	-	34.14	4.29	0	24.0	34.14	4.29	23.01	486	0.00
9	23.93	34.14	4.74	10	23.9	34.14	4.74	23.04	483	0.05
23	-	34.13	4.71	20	23.8	34.13	4.73	23.07	481	0.10
52	14.66	34.05	3.28	30	23.7	34.12	4.59	23.09	479	0.14
76	-	33.87	2.86	50	14.8	34.06	3.38	25.31	267	0.22
103	11.17	34.05	2.08	75	12.9	33.87	2.86	25.57	243	0.28
154	10.16	34.19	1.64	100	11.2	34.02	2.20	26.00	202	0.34
205	9.94	34.40	0.91	150	10.24	34.18	1.68	26.29	174	0.44
304	9.22	34.53	0.33	200	9.95	34.38	0.99	26.50	154	0.52
409	7.98	34.47	0.26	250	9.67	34.49	0.57	26.63	142	0.60
510	6.96	34.46	0.18	300	9.27	34.53	0.35	26.72	133	0.67
610	6.11	34.42	0.22	400	8.08	34.47	0.26	26.87	119	0.80
809	4.68	34.51	0.33	500	7.05	34.46	0.19	27.01	106	0.92
1010	3.79	34.52	0.62	600	6.19	34.42	0.21	27.09	98	1.02
1211	3.32	34.56	0.84	700	5.39	34.45	0.25	27.22	86	1.12
				800	4.72	34.50	0.32	27.34	75	1.21
				1000	3.82	34.52	0.62	27.44	65	1.36

CREST; October 4, 1951; 0106, 0126 GCT; 25°08'N, 116°02'W; sounding, 2150 fm; wind, 350°, force 4; weather, cloudy; sea, rough; wire angle, 22°, 25°. 130.70

0	-	34.45	4.57	0	23.9	34.45	4.57	23.28	461	0.00
9	23.82	34.47	4.74	10	23.8	34.47	4.76	23.32	457	0.05
23	-	34.34	4.82	20	23.8	34.42	4.81	23.28	460	0.09
49	16.10	33.48	5.74	30	22.9	34.29	4.89	23.45	444	0.14
70	-	33.75	4.09	50	16.0	33.48	5.74	24.60	335	0.21
94	12.60	33.91	2.81	75	14.0	33.79	3.75	25.27	271	0.29
				100	12.69	34.03	2.69	25.72	228	0.36
140	11.01	34.11	1.84	150	10.92	34.17	1.61	26.17	186	0.46
186	10.73	34.38	1.02	200	10.60	34.41	0.88	26.41	163	0.55
277	9.57	34.47	0.44	250	9.96	34.46	0.53	26.56	149	0.63
374	8.13	34.43	0.33	300	9.18	34.46	0.40	26.69	136	0.70
469	7.41	34.47E	0.20	400	7.91	34.44	0.30	26.87	119	0.84
563	6.40	34.48E	0.28	500	7.11	34.47	0.20	27.01	106	0.95
753	5.17	34.52E	0.30	600	6.12	34.48	0.30	27.14	93	1.06
952	4.29	34.62E	0.47	700	5.46	34.50	0.30	27.25	83	1.15
1150	3.72	34.60E	0.62	800	4.92	34.54	0.31	27.34	74	1.24
				1000	4.12	34.62	0.52	27.49	60	1.38

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OBSERVED				INTERPOLATED				COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_{T_3} 10^{-5} cm^3/g	ΔD dyn. m
133.25	CREST; October 2, 1951; 2048 GCT; 26°04.5'N, 112°48.5'W; sounding, 45 fm; wind, 290°, force 4; weather, partly cloudy; sea, moderate; wire angle, 05°.									
0	26.07	34.65E	4.11	0	26.07	34.65	4.11	22.76	510	0.00
10	26.05	34.58	4.60	10	26.05	34.58	4.60	22.72	514	0.05
25	25.73	34.55E	4.56	20	25.92	34.56	4.58	22.75	511	0.10
49	20.76	34.50E	4.54	30	24.80	34.54	4.55	23.08	480	0.15
133.30	CREST; October 2, 1951; 1746 GCT; 25°54'N, 113°07.5'W; sounding, 135 fm; wind, 340°, force 4; weather, clear; sea, moderate; wire angle, 04°.									
0	25.92	-	4.23	0	25.92		4.23			
10	25.87	34.54	4.22	10	25.87	34.54	4.22			
25	21.74	-	4.98	20	25.81		4.69			
49	17.44	-	5.20	30	19.82		5.05			
74	15.03	33.93E	5.08	50	17.44		5.20			
98	13.72	33.96E	3.30	75	15.00		5.08			
150	13.22	-	0.76	100	13.60		2.92			
203	12.17	-	0.21	150	13.22		0.76			
				200	12.25		0.24			
137.23	CREST; October 2, 1951; 0920 GCT; 25°35'N, 112°11.5'W; sounding, 41 fm; wind, 300°, force 4; weather, clear; sea, slight; wire angle, 02°.									
0	27.24	34.78E	4.43	0	27.24	34.78	4.43	22.49	536	0.00
10	27.25	34.71	4.42	10	27.25	34.71	4.42	22.44	541	0.05
25	27.25	34.73E	4.28	20	27.25	34.72	4.31	22.45	540	0.11
50	23.93	34.63E	4.36	30	27.25	34.72	4.28	22.45	540	0.16
				50	23.93	34.63	4.36	23.40	449	0.26
137.30	CREST; October 2, 1951; 1248 GCT; 25°21'N, 112°47'W; sounding, 218 fm; wind, 350°, force 5; weather, clear; sea, moderate; wire angle, 16°.									
0	27.60	-	4.43	0	27.60	(34.72)	4.43	(22.33)	(551)	(0.00)
8	27.60	34.72	4.44	10	27.59	34.72	4.46	22.33	551	0.06
23	27.26	34.68E	4.50	20	27.42	34.69	4.49	22.38	547	0.11
47	23.07	34.53E	4.97	30	25.92	34.66	4.57	22.82	504	0.16
70	17.50	34.22E	4.15	50	20.81	34.50	4.96	24.19	374	0.25
92	15.78	34.55E	1.67	75	17.45	34.25	2.95	24.94	303	0.34
146	13.69	34.64E	0.76	100	15.40	34.56	1.50	25.57	243	0.40
191	13.25	34.85E	0.26	150	13.62	34.66	0.67	26.03	199	0.52
236	11.90	34.78E	0.16	200	13.11	34.84	0.23	26.27	176	0.61
285	11.33	34.75E	0.09	250	11.70	34.77	0.13	26.49	155	0.70
339	10.95	34.69E	0.12	300	11.22	34.73	0.10	26.55	150	0.78

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; November 8, 1951; 1418 GCT; 37°48.5'N, 123°16'W; sounding, 74 fm; wind, 360°, force 5; weather, partly cloudy; sea, very rough; wire angle, 12°.								60.55
0	11.94		5.52	1.25	0	11.94	5.52	1.25
10	11.94	33.23	5.55	1.26	10	11.94	5.55	1.26
49	10.84		3.98	1.49	20	11.77	5.38	1.29
73	10.27		3.60	-	30	11.43	4.99	1.34
99	9.94		3.29	-	50	10.83	3.97	
					75	10.24	3.57	
					100	(9.93)	(3.26)	
CREST; November 8, 1951; 1021 GCT; 37°37'N, 123°37'W; sounding, 1950 fm; wind, 330°, force 6; weather, clear; sea, very rough; wire angle, 28°.								60.60
0	14.44		5.58	0.68	0	14.44	5.58	0.68
8	14.42	33.30	5.62	0.72	10	14.42	5.63	0.73
26	14.36		5.64	0.74	20	14.38	5.64	0.74
49	11.80		4.96	1.19	30	14.30	5.59	0.76
70	9.63		4.07	-	50	11.75	4.91	1.26
86	9.20		3.55	1.92	75	9.50	3.85	1.84
122	8.56		2.90	2.17	100	8.89	3.23	2.02
162	8.22		2.60	2.25	150	8.32	2.68	2.23
237	7.67		2.15	2.56	200	7.93	2.39	2.38
311	6.74		1.46	2.80	250	7.53	2.03	2.61
385	6.16		0.91	-	300	6.89	1.57	2.77
460	5.56		0.62	2.71u	400	6.05	0.83	
629	4.92		0.32	3.23	500	5.38	0.53	
826a)	4.20		0.29	-	600	5.01	0.35	
1029a)	3.76		0.67	3.28	700	4.66	0.31	
					800	4.28	0.30	
					1000	3.80	0.59	
CREST; November 8, 1951; 0438 GCT; 37°17'N, 124°21'W; sounding, 2450 fm; wind, 320°, force 5; weather, clear; sea, very rough; wire angle, 30°.								60.70
0	14.50		5.73	0.86	0	14.50	5.73	
8	14.49	33.24	5.76	0.81	10	14.49	5.76	
21	13.82		5.70	-	20	13.98	5.72	
48	11.56		4.89	-	30	12.90	5.59	
69	9.61		4.05	-	50	11.33	4.75	
95	8.75		3.65	1.95	75	9.25	3.93	
141	8.36		2.59	2.17	100	8.70	3.56	
187	7.88		2.41	-	150	8.26	2.52	
277	7.21		1.78	-	200	7.74	2.35	
373	6.38		1.25	-	250	7.38	1.99	
466	5.79		0.59	3.05	300	7.02	1.64	
559	5.08		0.41	-	400	6.19	1.05	
746	4.32		0.31	3.47	500	5.55	0.50	
941	3.88		0.50	3.42	600	4.87	0.37	
1135	3.38		0.55	-	700	4.48	0.32	
					800	4.27	0.33	
					1000	3.75	0.53	

a) Possible pretrip; depths may be in error.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
60.80	CREST; November 7, 1951; 2256 GCT; 36°57'N, 125°06'W; sounding, 2450 fm; wind, 340°, force 5; weather, partly cloudy; sea, very rough; wire angle, 25°.							
0	14.53			0.74	0	14.53		0.74
8	14.50	32.81		0.79	10	14.49		(0.80)
22	14.48			-	20	14.48		(0.80)
51	12.35			1.14	30	14.47		(0.83)
72	9.62			1.50	50	12.75		1.06
95	9.03			-	75	9.54		1.54
143	8.18			2.26	100	8.92		1.85
188	7.79			-	150	8.09		(2.29)
278	6.81			2.74	200	7.67		(2.49)
374	6.00			-	250	7.12		(2.66)
464	5.56			3.25	300	6.59		2.82
558	5.02			3.32	400	5.85		3.17
742	4.37			-	500	5.38		3.28
942	3.92			3.40	600	4.84		(3.34)
1141	3.45			3.31	700	4.50		(3.41)
					800	4.20		(3.44)
					1000	3.81		3.37
60.90	CREST; November 7, 1951; 1805, 1828 GCT; 36°53'N, 125°46'W; sounding, 2700 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°, 15°.							
0	16.26		5.48	0.62	0	16.26	5.48	0.62
					10	16.22	5.56	0.61
10	16.22	32.92	5.56	0.61	20	15.93	5.52	0.64
24	15.90		5.52	0.71	30	15.90	5.55	0.84
53	11.08		5.78	1.20	50	11.90	5.76	1.14
77	9.30		5.38	-	75	9.34	5.45	(1.50)
105	8.88		4.55	-	100	8.97	4.68	(1.65)
156	7.80		3.98	1.88	150	7.90	4.03	(1.86)
205	7.11		3.26	-	200	7.17	3.33	
305	6.25		1.96	-	250	6.70	2.63	
410	5.49		1.04	3.00	300	6.30	2.00	
511	5.02		0.62	3.21	400	5.55	1.10	(2.98)
612	4.80		0.44	-	500	5.07	0.67	3.18
812	4.18		0.33	-	600	4.82	0.45	
1019	3.66		0.44	3.22	700	4.57	0.36	
1216	3.22		0.64	3.20	800	4.23	0.33	
					1000	3.70	0.41	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; November 7, 1951; 1122, 0915 GCT; 36°17'N, 126°30'W; sounding, 2450 fm; wind, 360°, force 5; weather, partly cloudy; sea, rough; wire angle, 25°, 30°. 60.100

0	16.82		5.45	0.65	0	16.82	5.45	0.65
9	16.83	32.85	5.62	0.58	10	16.83	5.62	0.60
23	16.82		5.49	0.60	20	16.83	5.50	0.60
52	13.44		5.85	-	30	16.82	5.52	0.61
72	11.48		5.88	0.72	50	13.69	5.84	0.64
97	10.20		5.69	0.90	75	11.30	5.86	0.73
143	8.67		4.80	-	100	10.02	5.65	0.94
190	8.07		3.50	1.98	150	8.58	4.65	1.52
279	7.10		2.52	2.42	200	7.95	3.37	2.06
377	5.99		1.56	2.76	250	7.41	2.80	2.32
470	5.20		0.86	2.68u	300	6.89	2.30	2.50
564	4.77		0.48	3.06	400	5.72	1.35	
750	4.14		0.55	-	500	5.03	0.68	
949	3.68		0.47	-	600	4.65	0.48	
1139	3.24		0.70	3.07	700	4.32	0.51	
					800	4.01	0.54	
595a)	4.92		-	-	1000	3.62	0.48	
982	3.68		-	-	1200	3.17		
1197	3.18		-	-	1500	2.64		
1774	2.21		-	-	2000	2.01		
2062	1.95		-	-	2500	1.76		
2338	1.81		-	-	3000	1.60		
2617	1.72		-	-				
2947	1.61		-	-				
3336	1.54		-	-				

CREST; November 9, 1951; 2157 GCT; 37°19'N, 122°36'W; sounding, 50 fm; wind, 350°, force 2; weather, drizzle; sea, slight; wire angle, 00°. 63.52

0	13.10		5.67	1.13	0	13.10	5.67	1.13
10	12.93		5.49	1.11	10	12.93	5.49	1.11
25	11.74		4.69	-	20	12.35	5.00	
50	11.08		4.20	-	30	11.50	4.54	
75	10.88		4.04	-	50	11.08	4.20	
					75	10.88	4.04	

CREST; November 9, 1951; 2341 GCT; 37°13'N, 122°49'W; sounding, 150 fm; wind, 310°, force 2; weather, overcast; sea, slight; wire angle, 05°. 63.55

0	14.09		5.93	0.74	0	14.09	5.93	0.74
10	13.93	33.31	5.99	0.72	10	13.93	5.99	0.72
25	13.76b)		6.03	0.76	20	13.82	6.03	0.74
50	13.36		5.81	0.86	30	13.69	6.01	0.76
73	10.06		3.85	1.75	50	13.36	5.81	0.86
96	9.84		3.19	2.00	75	10.05	3.70	1.78
147	9.15		2.58	2.18	100	9.79	3.12	2.02
194	8.50		2.22	-	150	9.10	2.55	(2.20)
243	7.89		2.04	-	200	8.41	2.20	
					250	(7.81)	(2.02)	

CREST; November 10, 1951; 1436 GCT; 36°48'N, 122°05.5'W; sounding, 75 fm; wind, 030°, force 2; weather, fog; sea, slight; wire angle, 00°. 67.50

0	15.12		5.23	0.62	0	15.12	5.23	0.62
10	15.12	33.32	5.55	0.68	10	15.12	5.55	0.68
25	13.73		5.36	0.63	20	14.64	5.49	0.65
50	11.46		4.56	-	30	12.86	5.21	
100	10.48		3.69	1.74	50	11.46	4.56	
126	10.20		3.46	1.68	75	10.87	4.01	
					100	10.48	3.69	1.74

a) Overlapping casts; reconciliation of temperature curve.
b) Alternate value, 13.92°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
67.55	CREST; November 10, 1951; 1119 GCT; 36°39'N, 122°26'W; sounding, 1250 fm; wind, 030°, force 2; weather, overcast; sea, slight; wire angle, 00°.							
0	14.98		5.40	0.78	0	14.98	5.40	0.78
10	14.98	33.33	5.60	0.73	10	14.98	5.60	0.73
25	14.94		5.60	0.73	20	14.95	5.60	0.72
50	11.48		4.85	1.48	30	14.50	5.53	0.75
75	9.99		3.94	-	50	11.48	4.85	1.48
99	9.48		3.48	1.98	75	9.99	3.94	1.80
152	8.91		2.55	2.33	100	9.46	3.41	2.00
199	8.62		2.22	-	150	8.94	2.57	2.32
295	7.28		1.79	-	200	8.62	2.21	
396	6.36		1.06	-	250	8.01	1.99	
492	5.90		0.62	3.21	300	7.21	1.73	
590	5.34		0.46	-	400	6.34	1.03	
					500	5.88	0.61	
					600	(5.29)	(0.42)	
67.65	CREST; November 10, 1951; 0608 GCT; 36°19'N, 123°09'W; sounding, 2000 fm; wind, 340°, force 3; weather, overcast; sea, slight; wire angle, 11°.							
0	15.02		5.63	-	0	15.02	5.63	
10	15.00	33.27	5.57	0.69	10	15.00	5.57	0.69
25	15.02		5.44	0.72	20	15.01	5.48	0.70
49	13.28		5.38	1.02	30	15.03	5.42	0.76
73	9.81		4.83	1.50	50	13.15	5.36	1.02
97	8.82		4.32	-	75	9.70	4.80	(1.52)
148	8.40		3.09	-	100	8.79	4.24	(1.79)
194	7.96		2.90	2.12	150	8.37	3.07	(2.01)
284	7.08		2.07	2.57	200	7.90	2.86	2.14
380	6.42		1.11	-	250	7.40	2.41	2.43
473	5.92		0.61	-	300	6.95	1.90	
570	5.39		0.41	2.93	400	6.31	0.97	
760	4.66		0.37	-	500	5.78	0.53	
950	4.06		0.46	3.08	600	5.25	0.39	
1151	3.51		0.67	3.00	700	4.88	0.35	
					800	4.52	0.37	
					1000	3.91	0.48	
70.51	CREST; November 10, 1951; 1913 GCT; 36°10.5'N, 121°46'W; sounding, 210 fm; wind, 150°, force 2; weather, partly cloudy; sea, slight; wire angle, 00°.							
0	14.14		5.62	0.61	0	14.14	5.62	0.61
10	14.02		5.68	0.74	10	14.02	5.68	0.74
25	12.98		5.21	-	20	13.44	5.37	0.86
50	11.80		4.81	1.22	30	12.65	5.12	0.98
74	11.22		4.39	1.78	50	11.80	4.81	1.22
98	10.62		3.98	-	75	11.20	4.38	1.80
149	9.53		2.86	2.40	100	10.56	3.94	2.22
195	8.82		2.34	2.48	150	9.52	2.85	2.40
244	8.55		2.01	2.56	200	8.79	2.28	2.49
292	8.22		1.93	2.30u	250	8.52	1.99	
					300	(8.17)	(1.93)	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; November 10, 1951; 2326 GCT; 35°53'N, 122°33'W; sounding, 1800 fm; wind, 180°, force 3; weather, overcast; sea, slight; wire angle, 18°.								70.60
0	15.48		5.58	0.64	0	15.48	5.58	0.64
10	14.80	33.30	5.72	0.72	10	14.80	5.72	0.72
24	14.66		5.72	0.79	20	14.69	5.75	0.76
47	11.27		4.44	1.58	30	14.65	5.64	0.85
71	9.87		4.15	1.85	50	11.01	4.40	1.64
95	9.22		3.63	2.04	75	9.70	4.06	1.87
146	8.59		2.83	-	100	9.15	3.53	(2.07)
191	8.27		2.28	-	150	8.54	2.76	(2.30)
280	7.10		1.53	2.80	200	8.18	2.19	(2.49)
375	6.31		0.97	3.10	250	7.50	1.78	(2.68)
466	5.72		0.62	3.30	300	6.91	1.40	2.87
562	5.30		0.39	3.37	400	6.13	0.85	3.16
751	4.56		0.24	3.64	500	5.55	0.53	3.34
942	3.97		0.35	3.70	600	5.15	0.33	3.40
1145	3.38		0.67	3.52	700	4.76	0.27	3.57
					800	4.38	0.27	3.67
					1000	3.83	0.41	3.66
CREST; November 11, 1951; 0447 GCT; 35°33'N, 123°06'W; sounding, 2100 fm; wind, 350°, force 3; weather, partly cloudy; sea, slight; wire angle, 26°.								70.70
0	14.78		5.78	0.70	0	14.78	5.78	0.70
8	14.72	33.31	5.68	0.72	10	14.72	5.67	0.73
23	14.70		5.65	0.78	20	14.70	5.66	0.77
45	14.50		5.51	0.82	30	14.66	5.65	0.78
67	10.31		4.13	1.78u	50	13.55	5.18	
88	9.41		3.51	1.78	75	9.70	3.87	
133	8.90		2.72	-	100	9.27	3.28	
174	8.54		2.30	-	150	8.75	2.54	
256	7.56		1.75	-	200	8.26	2.11	
344	6.64		1.15	3.13	250	7.63	1.79	
428	6.10		0.77	3.12	300	7.08	1.43	
517	5.50		0.45	3.32	400	6.27	0.89	3.12
696	4.68		0.36	-	500	5.60	0.50	3.29
880	4.12		0.42	3.42	600	5.07	0.38	(3.36)
1077	3.63		0.58	-	700	4.65	0.36	(3.38)
					800	4.36	0.39	(3.41)
					1000	3.83	0.50	
CREST; November 11, 1951; 1020 GCT; 35°13'N, 123°51'W; sounding, 4300 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°.								70.80
0	16.74		5.43	0.62	0	16.74	5.43	0.62
10	16.74	33.04	5.42	0.75	10	16.74	5.42	0.75
25	16.72		5.43	0.89	20	16.73	5.43	0.84
49	14.48		5.79	1.34	30	16.72	5.46	0.94
73	11.36		5.91	1.65	50	14.33	5.80	1.36
96	9.85		5.70	-	75	11.30	5.91	1.66
147	8.38		4.13	2.16	100	9.69	5.53	1.86
192	7.98		3.50	2.46	150	8.31	4.07	2.18
283	7.07		1.95	2.82	200	7.93	3.38	2.50
381	6.04		1.08	3.16	250	7.45	2.50	2.70
473	5.53		0.69	-	300	6.89	1.75	2.89
571	5.00		0.37	3.36	400	5.90	0.98	3.19
762	4.46		0.35	3.44	500	5.40	0.58	3.32
952	3.94		0.47	-	600	4.90	0.35	3.37
1150	3.43		0.71	3.37	700	4.60	0.33	3.42
					800	4.36	0.38	3.44
					1000	3.81	0.52	3.43

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
73.50	CREST; November 12, 1951; 0156 GCT; 35°37'N, 121°17'W; sounding, 50 fm; wind, 310°, force 4; weather, partly cloudy; sea, very rough; wire angle, 17°.							
0	14.76		5.55	0.69	0	14.76	5.55	0.69
9	14.76	33.28	5.53	0.74	10	14.75	5.53	0.76
23	13.66		5.27	0.92	20	14.12	5.33	0.86
46	12.16		4.88	1.27	30	13.08	5.10	1.06
71	12.10		4.61	1.31	50	12.13	4.81	1.29
					75	(12.10)	(4.59)	(1.32)
73.60	CREST; November 11, 1951; 2030 GCT; 35°16'N, 122°02'W; sounding, 1550 fm; wind, 320°, force 4; weather, partly cloudy; sea, very rough; wire angle, 14°.							
0	15.22		5.50	0.63	0	15.22	5.50	0.63
10	15.19	33.39	5.67	0.72	10	15.19	5.67	0.72
24	13.87		5.61	0.67	20	15.06	5.65	0.68
48	10.88		5.36	0.92	30	12.36	5.57	0.68
72	9.65		4.48	0.92	50	10.76	5.28	0.92
95	8.92		3.67	-	75	9.55	4.35	0.93
145	8.34		2.79	1.78	100	8.85	3.54	1.16
190	7.85		2.37	2.08	150	8.28	2.72	1.82
281	7.30		1.53	2.62	200	7.78	2.29	2.14
378	6.38		0.88	3.11	250	7.47	1.83	2.43
470	5.83		0.39	3.22	300	7.14	1.40	2.73
570	5.38		0.35	-	400	6.22	0.75	3.15
759	4.59		0.35	3.48	500	5.69	0.35	(3.25)
952	3.89		0.52	3.48	600	5.25	0.36	(3.36)
1160	3.40		0.70	3.28	700	4.83	0.35	(3.45)
					800	4.44	0.37	3.48
					1000	3.75	0.59	3.45
77.50	CREST; November 12, 1951; 0636 GCT; 35°04.5'N, 120°52'W; sounding, 85 fm; wind, 320°, force 3; weather, cloudy; sea, very rough; wire angle, 00°.							
0	15.76		5.66	0.62	0	15.76	5.66	0.62
10	15.72	33.33	5.62	0.64	10	15.72	5.62	0.64
26	13.78		5.26	0.94	20	14.60	5.33	0.88
50	12.09		4.91	1.20	30	13.31	5.18	1.00
75	11.50		4.62	1.34	50	12.09	4.91	1.20
100	10.94		4.23	1.57	75	11.50	4.62	1.34
125	10.30		3.83	1.80	100	10.94	4.23	1.57
77.55	CREST; November 12, 1951; 0932 GCT; 34°54.5'N, 121°13'W; sounding, 310 fm; wind, 270°, force 4; weather, overcast; sea, rough; wire angle, 00°.							
0	15.46		5.61	0.62	0	15.46	5.61	0.62
10	15.48	33.31	5.62	0.66	10	15.48	5.62	0.66
25	13.46		5.64	0.68	20	15.25	5.65	0.67
50	10.43		5.40	0.88	30	11.66	5.64	0.70
75	10.12		4.48	1.06	50	10.43	5.40	0.88
100	9.06		3.68	1.28	75	10.12	4.48	1.06
154	8.40		2.89	1.79	100	9.06	3.68	1.28
200	8.10		2.68	2.25	150	8.44	2.93	1.75
246	7.72		1.92	2.68	200	8.10	2.68	2.25
294	7.39		1.63	-	250	7.68	1.88	2.73
346	6.89		1.19	-	300	7.34	1.60	3.08
394	6.78		0.77	3.18	400	6.74	0.75	3.18
443	6.04		0.70	3.28	500	(5.70)	(0.53)	(3.24)
492	5.75		0.56	3.25				

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; November 12, 1951; 1424 GCT; 34°34'N, 121°55'W; sounding, 2150 fm; wind, 260°, force 3; weather, overcast; sea, very rough; wire angle, 21°. 77.65

0	14.60		5.75	0.84	0	14.60	5.75	0.84
9	14.38	33.22	5.75	0.92	10	14.35	5.74	0.92
23	13.06		5.37	0.90	20	13.56	5.40	0.90
47	9.89		5.34	1.01	30	11.90	5.34	0.91
69	9.04		4.71	1.06	50	9.58	5.34	1.02
91	9.34		3.44	1.18	75	9.09	4.25	1.09
137	8.93		2.54	1.70	100	9.32	3.21	1.26
175	8.38		2.07	1.96	150	8.76	2.33	1.80
252	7.27		1.74	-	200	7.99	1.94	(2.12)
337	6.32		1.25	3.07	250	7.31	1.75	(2.45)
416	5.83		0.74	3.10	300	6.71	1.49	(2.81)
503	5.51		0.51	3.15	400	5.90	0.82	3.09
675	4.79		0.27	-	500	5.52	0.52	3.15
853	4.22		0.38	-	600	5.13	0.34	(3.21)
1047	3.74		1.00	3.29	700	4.70	0.27	(3.29)
					800	4.37	0.32	(3.34)
					1000	3.86	0.85	3.31

CREST; November 4, 1951; 1207 GCT; 34°25.5'N, 120°36'W; sounding, 139 fm; wind, 350°, force 1; weather, clear; sea, moderate; wire angle, 10°. 80.51

0	17.80		5.39	-	0	17.80	5.39	
10	17.12	33.34	5.59	-	10	17.12	5.59	
25	15.04		5.61	0.65	20	16.08	5.62	
49	12.80		5.14	0.99	30	14.03	5.57	0.68
72	12.44		5.14	1.05	50	12.78	5.14	1.00
94	11.98		4.85	1.08	75	12.41	5.13	1.05
119	10.34		3.80	1.86	100	11.57	4.56	1.12

CREST; November 4, 1951; 1727 GCT; 34°20'N, 120°49.5'W; sounding, 450 fm; wind, 150°, force 2; weather, clear; sea, rough; wire angle, 00°. 80.55

0	16.90		5.52	0.55	0	16.90	5.52	0.55
10	16.83	33.38	5.52	0.57	10	16.83	5.52	0.57
25	15.52		5.57	0.66	20	16.75	5.57	0.62
50	11.24		4.68	1.21	30	14.10	5.56	0.72
75	10.25		3.91	1.62	50	11.24	4.68	1.21
99	10.02		3.02	-	75	10.25	3.91	1.62
150	9.37		2.37	2.14	100	10.00	2.99	1.74
197	8.99		2.06	-	150	9.37	2.37	2.14
244	8.54		2.09	2.31	200	8.94	2.04	2.20
291	8.24		2.10	-	250	8.50	2.08	2.33
343	7.64		1.26	2.74	300	8.16	2.00	2.58
390	7.24		0.99	2.86	400	7.14	0.95	2.88
487	6.00		0.75	3.06	500	5.89	0.73	3.08
589	5.38		0.42	3.24	600	5.32	0.40	
687	4.95		0.36	-	700	(4.90)		

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
80.60	CREST; November 4, 1951; 2108 GCT; 34°09'N, 121°09'W; sounding, 1320 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 15°.							
0	16.02		5.56	0.72	0	16.02	5.56	0.72
10	15.80	33.35	5.62	-	10	15.80	5.62	0.68
24	15.46		5.71	0.62	20	15.55	5.71	0.63
48	10.51		4.80	1.48	30	14.40	5.68	0.62
72	9.86		4.21	1.70	50	10.28	4.70	1.50
95	9.74		3.54	1.88	75	9.83	4.15	1.72
145	9.22		2.38	2.28	100	9.68	3.35	1.92
192	8.94		2.10	-	150	9.18	2.34	(2.31)
282	8.06		1.45	2.68	200	8.88	2.06	(2.49)
378	6.86		0.93	-	250	8.42	1.73	(2.62)
472	6.18		0.65	2.96	300	7.82	1.34	2.71
567	5.61		0.36	3.08	400	6.65	0.85	2.87
758	4.82		0.33	3.26	500	6.00	0.56	3.00
950	3.98		0.50	3.28	600	5.45	0.34	3.11
1158	3.51		0.75	3.25	700	5.04	0.33	3.21
					800	4.65	0.34	3.27
					1000	3.83	0.56	3.28
80.60	CREST; November 4, 1951; 2239, 2250 GCT;[a] 34°09'N, 121°09'W; sounding, 1320 fm; wind, 320°, force 3; weather, clear; sea, rough; wire angle, 12°, 12°.							
0	16.34							
10	15.74							
19	15.68							
29	14.67							
39	11.51							
48	10.85							
58	10.54							
67	9.88							
76	9.82							
85	9.71							
94	9.64							
104	9.62							
113	9.49							
123	9.45							
132	9.44							

a) Bathythermograph calibration cast.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; November 5, 1951; 0643, 0342, 0438 GCT; 33°51'N, 121°51'W; sounding, 2000 fm; wind, 320°, force 3; weather, missing; sea, missing; wire angle, 12°, 05°, 03°. 80.70

0	16.64		5.34	0.64	0	16.64	5.34	0.64
10	16.64	33.36	5.36	0.62	10	16.64	5.36	0.62
25	15.30		5.59	0.68	20	16.00	5.56	0.64
49	11.76		4.97	1.33	30	14.40	5.57	0.78
73	10.14		4.36	1.63	50	11.60	4.95	1.36
97	9.53		3.58	1.98	75	10.05	4.31	1.66
149	8.82		2.83	2.23	100	9.46	3.49	2.00
196	8.51		2.26	2.39	150	8.82	2.81	2.24
290	7.27		1.67	2.83	200	8.45	2.21	2.41
389	6.73		0.97	3.16	250	7.71	1.88	2.64
583	5.74		0.37	-	300	7.21	1.60	2.87
779	4.72		0.31	3.50	400	6.68	0.90	
973	3.94		0.54	-	500	6.14	0.52	
1177	3.32		0.73	3.39	600	5.66	0.35	
					700	5.13	0.32	
669a)	5.66		-	-	800	4.63	0.32	
1115	3.51		-	-	1000	3.86	0.59	
					1200	3.27		
1343	3.00		-	-	1500	2.70		
1680	2.42		-	-	2000	2.15		
2570	1.77		-	-	2500	1.82		
2866	1.66		-	-	3000	1.63		
3202	1.60		-	-				
3601	1.56		-	-				

CREST; November 5, 1951; 1328 GCT; 33°29'N, 122°32'W; sounding, 2350 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 24°. 80.80

0	15.81		5.48	0.68	0	15.81	5.48	0.68
9	15.80	33.34	5.53	-	10	15.80	5.53	0.65
23	15.74		5.53	0.65	20	15.76	5.53	0.64
46	14.47b)		5.31	0.88	30	15.72	5.49	0.68
69	9.80		5.11	1.43	50	12.40	5.26	0.96
90	9.38		4.42	-	75	9.66	5.02	1.52
136	8.60		3.30	2.02	100	9.21	4.14	1.77
175	8.11		2.84	2.18	150	8.42	3.11	2.08
257	7.20		1.93	-	200	7.88	2.56	(2.29)
346	6.37		1.22	2.94	250	7.46	2.00	(2.54)
428	5.89		0.61	2.74u	300	6.90	1.56	(2.80)
515	5.52		0.43	3.02	400	6.04	0.79	2.98
695	4.78		0.41	-	500	5.59	0.44	3.02
878	4.13		0.35	3.10	600	5.19	0.41	(3.04)
1074	3.62		0.53	3.16	700	4.75	0.40	(3.06)
					800	4.38	0.37	(3.08)
					1000	3.83	0.43	3.14

a) Overlapping casts; reconciliation of temperature curve.
b) Alternate value, 14.05°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
80.90	CREST; November 5, 1951; 1955 GCT; 33°09'N, 123°13'W; sounding, 2450 fm; wind, 350°, force 3; weather, overcast; sea, rough; wire angle, 16°.							
0	16.33		5.51	0.62	0	16.33	5.51	0.62
10	16.16	33.15	5.55	0.66	10	16.16	5.55	0.66
24	15.63		5.59	0.67	20	15.86	5.59	0.67
53	14.68		5.53	0.77	30	15.43	5.57	0.68
76	10.60		5.75	0.94	50	14.81	5.53	0.74
105	9.54		4.80	1.56	75	10.63	5.74	0.94
156	8.62		3.44	2.06	100	9.70	5.05	1.40
205	8.02		2.74	2.21	150	8.74	3.55	2.03
304	6.80		1.45	2.74	200	8.08	2.83	2.20
408	5.83		1.05	3.04	250	7.48	2.07	2.42
508	5.32		0.46	3.16	300	6.86	1.48	2.74
608	4.98		0.31	3.20	400	5.91	1.09	3.02
806	4.38		0.40	-	500	5.37	0.50	3.15
1011	3.88		0.58	3.26	600	5.00	0.31	3.20
1212	3.42		0.79	-	700	4.68	0.32	(3.23)
					800	4.39	0.40	(3.26)
					1000	3.88	0.56	(3.26)
80.100	CREST; November 6, 1951; 0605, 0144, 0239 GCT; 32°49'N, 123°54'W; sounding, 2550 fm; wind, 360°, force 3; weather, cloudy; sea, rough; wire angle, 22°, 22°, 32°.							
0	17.80		5.22	0.60	0	17.80	5.22	0.60
9	17.82	33.24	5.23	0.60	10	17.82	5.23	0.60
23	17.82		5.22	0.60	20	17.82	5.22	0.60
46	17.67		5.23	0.62	30	17.80	5.22	0.61
69	16.22		5.59	0.63	50	17.60	5.26	0.62
92	13.56		5.79	0.66	75	15.50	5.68	0.63
140	9.96		4.97	0.68	100	12.83	5.78	0.67
181	9.02		3.94	-	150	9.69	4.72	(0.70)
266	7.80		2.76	1.84	200	8.73	3.63	(1.48)
356	6.76		1.66	2.21	250	8.00	2.94	(1.77)
537	5.49		0.54	-	300	7.47	2.32	1.99
721	4.78		0.39	-	400	6.35	1.22	
908	4.14		0.47	3.16	500	5.67	0.63	
1107	3.56		0.82	-	600	5.20	0.47	
					700	4.83	0.40	
589a)	5.32		-	-	800	4.50	0.40	
997	3.98		-	-	1000	3.96	0.60	
1202	3.48		-	-	1200	3.48		
1506	2.79		-	-	1500	2.81		
					2000	2.16		
552a)	5.53		-	-	2500	1.82		
923	4.09		-	-	3000	1.64		
1109	3.60		-	-				
1394	2.97		-	-				
2128	2.04		-	-				
2383	1.87		-	-				
2671	1.74		-	-				
3015	1.64		-	-				

a) Overlapping casts; reconciliation of temperature curve.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; November 4, 1951; 0442 GCT; 34°07.5'N, 119°31'W; sounding, 130 fm; wind, 300°, force 2; weather, clear; sea, slight; wire angle, 00°. 83.43

0	18.02		5.39	0.54	0	18.02	5.39	0.54
10	18.02	33.41	5.45	-	10	18.02	5.45	
25	15.55a)		5.63	-	20	16.69	5.62	
49	13.52b)		5.27	0.87	30	15.07	5.60	
73	12.01		4.68	1.12	50	13.47	5.25	0.88
97	10.91		3.97	1.44	75	11.90	4.63	1.15
149	9.60		3.18	1.90	100	10.80	3.90	1.48
196	9.33		2.17	2.28	150	9.56	3.13	1.92
					200	(9.31)	(2.08)	(2.31)

CREST; November 4, 1951; 0138 GCT; 34°01'N, 119°02.5'W; sounding, 55 fm; wind, 320°, force 3; weather, clear; sea, slight; wire angle, 05°. 85.38

0	18.62		4.92	0.53	0	18.62	4.92	0.53
10	18.32	33.39	5.41	0.56	10	18.32	5.41	0.56
25	17.78		5.46	0.56	20	18.00	5.43	0.56
50	13.64		5.70	0.75	30	16.04	5.51	0.58
76	12.10		5.05	1.16	50	13.64	5.70	0.75
					75	12.10	5.06	1.16

CREST; November 3, 1951; 2304 GCT; 33°57'N, 119°11.5'W; sounding, 450 fm; wind, 300°, force 1; weather, clear; sea, slight; wire angle, 00°. 85.40

0	18.40		5.34	0.56	0	18.40	5.34	0.56
10	17.78	33.35	5.51	0.48	10	17.78	5.51	0.48
25	15.24		5.89	0.54	20	15.97	5.90	0.51
50	12.38		5.35	0.94	30	14.55	5.87	0.61
75	10.92		4.55	1.37	50	12.38	5.35	0.94
100	10.18		3.82	-	75	10.92	4.55	1.37
153	9.20		3.31	1.98	100	10.18	3.82	1.69
203	9.04		2.04	2.46	150	9.24	3.36	1.96
250	8.70		1.89	2.53	200	9.04	2.06	2.45
295	8.28		1.41	2.78	250	8.70	1.89	2.53
392	7.38		0.76	2.94	300	8.21	1.38	2.79
488	6.66		0.46	3.19	400	7.31	0.73	2.96
590	5.69		0.32	-	500	6.54	0.42	(3.22)
686	5.31		-	-	600	5.63	(0.31)	

CREST; November 3, 1951; 1803 GCT; 33°38'N, 119°51'W; sounding, 92 fm; wind, 290°, force 3; weather, clear; sea, slight; wire angle, 18°. 85.50

0	16.73		5.52	-	0	16.73	5.52	
9	16.58	33.38	5.57	0.52	10	16.54	5.57	0.52
23	14.80		5.62	0.64	20	15.90	5.63	0.57
47	10.74		4.88	1.26	30	12.80	5.57	0.71
70	10.33		4.32	1.48	50	10.67	4.76	1.29
93	9.86		3.96	1.65	75	10.19	4.22	1.53
116	9.84		3.83	1.62	100	9.84	3.90	1.65
143	9.05		2.93	-	150	(8.90)	(2.84)	

a) Alternate value, 14.56°C, not used in interpolation.
b) Alternate value, 12.14°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
85.60	CREST; November 3, 1951; 1242 GCT; 33°15.5'N, 120°31'W; sounding, 700 fm; wind, 320°, force 4; weather, missing; sea, slight; wire angle, 15°.							
0	16.94		5.21	0.55	0	16.94	5.21	0.55
10	16.96	33.31	5.38	0.58	10	16.96	5.38	0.58
24	16.76		5.41	0.58	20	16.86	5.40	0.57
48	13.14		5.83	0.73	30	16.65	5.46	0.58
72	10.18		5.16	1.33	50	12.60	5.83	0.78
96	9.33		4.49	-	75	9.99	5.08	1.39
145	8.74		3.31	2.10	100	9.27	4.39	1.74
190	8.52		2.31	-	150	8.70	3.07	(2.14)
279	7.19		2.20	-	200	8.50	2.26	
376	6.21		1.15	2.96	250	8.00	2.23	
753	4.82		0.55	3.34	300	6.90	1.97	
943	4.00		0.64	3.30	400	(6.04)	(1.03)	
1146	3.47		0.76	-	500	(5.54)	(0.74)	
					600	(5.21)	(0.60)	
					700	(4.96)	(0.54)	
					800	4.66	0.56	
					1000	3.83	0.67	
90.28	CREST; November 1, 1951; 1056 GCT; 33°28.5'N, 117°46.5'W; sounding, 150 fm; wind, 010°, force 1; weather, clear; sea, slight; wire angle, 00°.							
0	17.96		5.26	0.53	0	17.96	5.26	0.53
9	17.78	33.26	5.30	0.62	10	17.75	5.32	0.62
25	15.44		5.47	0.68	20	16.30	5.42	0.66
49	13.26		5.48	0.78	30	14.98	5.49	0.70
73	12.10		4.64	1.06	50	13.25	5.46	0.80
97	11.40		4.00	1.49	75	12.01	4.59	1.12
149	10.61		2.83	2.00	100	11.36	3.95	1.56
197	9.66		2.29	2.22	150	10.60	2.82	2.02
248	9.13		2.07	-	200	9.61	2.25	(2.23)
					250	(9.11)	(2.06)	
90.30	CREST; November 1, 1951; 1409 GCT; 33°24.5'N, 117°54.5'W; sounding, 350 fm; wind, 060°, force 1; weather, overcast; sea, smooth; wire angle, 00°.							
0	18.06				0	18.06		
10	18.03	33.31			10	18.03		
25	14.50				20	15.31		
50	12.95				30	14.29		
75	11.29				50	12.95		
99	10.94				75	11.29		
151	10.38				100	10.93		
199	9.98				150	10.39		
245	9.21				200	9.97		
291	8.62				250	9.15		
343	8.27				300	8.55		
389	7.49				400	7.35		
438	7.10				500	(6.22)		
492	6.34							

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

CREST; November 1, 1951; 1808 GCT; 33°10.5'N, 118°25'W; sounding, 647 fm; wind, 260°, force 2; weather, overcast; sea, slight; wire angle, 06°. 90.37

0	18.30	33.35	5.15	0.51	0	18.30	5.15	0.51
10	18.29	33.35	5.18	0.55	10	18.29	5.18	0.55
25	16.06	33.29	5.16	0.60	20	18.24	5.14	0.59
50	12.32	33.26	5.33	0.61	30	15.43	5.18	0.59
74	10.68	33.35	5.42	0.84	50	12.32	5.33	0.61
98	10.00	33.57	4.46	1.29	75	10.65	5.43	0.86
150	9.81	34.00	2.58	2.09	100	9.99	4.40	1.36
197	9.10	34.01	1.71	2.38	150	9.81	2.58	2.09
290	7.80	34.14	1.23	2.63	200	9.03	1.69	2.38
389	7.29	34.23	0.85	2.83	250	8.24	1.40	2.54
484	6.51	34.27	0.45	2.80u	300	7.73	1.19	2.66
583	5.82	34.33	0.33	3.04	400	7.20	0.79	2.85
680	5.20	34.37	0.31	-	500	6.39	0.42	
781	4.78	34.41	0.52	3.19	600	5.73	0.30	3.06
979	4.26	34.43	0.72	3.22	700	5.10	0.34	3.14
					800	4.70	0.56	3.20
					1000	(4.22)	(0.73)	(3.22)

CREST; November 2, 1951; 1352 GCT; 32°55'N, 118°56'W; sounding, 1000 fm; wind, 240°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°. 90.45

0	17.77	33.42	5.64	0.55	0	17.77	5.64	0.55
10	17.77	33.45	4.94	0.56	10	17.77	4.94	0.56
25	15.88	33.30	5.27	0.58	20	16.95	5.25	0.57
50	11.12	33.28	-	1.32	30	14.54	5.23	0.61
75	10.08	33.44	3.94	1.72	50	11.12	4.77	1.32
99	9.28	33.68	3.36	1.90	75	10.08	3.94	1.72
151	8.82	33.95	2.54	2.16	100	9.26	3.34	1.90
198	8.38	34.09	1.92	-	150	8.83	2.56	2.15
292	7.70	34.18	1.31	2.71	200	8.36	1.91	2.45
392	6.99	34.24	0.69	2.98	250	7.97	1.60	2.60
487	6.39	34.31	0.43	3.03	300	7.65	1.24	2.74
588	5.62	34.33	0.30	-	400	6.94	0.65	3.00
785	4.67	34.42	0.30	-	500	6.30	0.39	(3.14)
979	3.98	34.49	0.48	3.27	600	5.55	0.29	
1184	3.82a)	34.52	0.56	3.22	700	5.04	0.28	
					800	4.61	0.30	
					1000	3.94	0.48	

CREST; November 2, 1951; 1837 GCT; 32°39.5'N, 119°29.5'W; sounding, 700 fm; wind, 350°, force 2; weather, overcast; sea, slight; wire angle, 10°. 90.53

0	17.10		5.52	0.66	0	17.10	5.52	0.66
10	16.89		5.53	-	10	16.89	5.53	0.64
25	16.85		5.52	0.64	20	16.86	5.52	0.64
49	15.60		5.73	1.08	30	16.85	5.55	0.72
73	12.04		5.84	1.34	50	15.50	5.74	1.08
97	10.02		5.13	1.53	75	11.68	5.83	1.34
148	8.84		3.35	-	100	9.94	5.00	(1.54)
195	8.24		3.13	-	150	8.80	3.33	
287	7.34		1.90	-	200	8.18	3.10	
385	6.62		1.17	-	250	7.69	2.43	
478	5.98		1.22	3.26	300	7.24	1.78	
575	5.51		0.51	-	400	6.53	1.14	
769	4.78		0.48	3.34	500	5.85	1.00	
962	4.00		0.69	-	600	5.42	0.50	
1164	3.82		0.72	-	700	5.03	0.50	
					800	4.64	0.50	
					1000	3.93	0.71	

a) Alternate value, 3.62°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
90.60	CREST; November 2, 1951; 2306 GCT; 32°26'N, 119°58'W; sounding, 500 fm; wind, 350°, force 2; weather, partly cloudy; sea, slight; wire angle, 08°.							
0	18.32		5.31	0.59	0	18.32	5.31	0.59
10	17.83	33.41	5.23	-	10	17.83	5.23	0.54
25	17.80		5.30	0.56	20	17.80	5.26	0.52
50	15.67		5.77	0.52	30	17.80	5.51	0.52
74	13.75		5.63	0.71	50	15.67	5.77	0.52
97	11.75		5.12	-	75	13.60	5.62	(0.71)
151	9.76		3.79	1.82	100	11.60	5.02	(1.16)
198	8.90		2.73	-	150	9.82	3.81	(1.82)
244	8.44		1.93	-	200	8.86	2.67	
290	8.31		1.39	2.79	250	8.40	1.85	
388	7.22		0.70	3.08	300	8.26	1.30	
582	5.36		0.34	-	400	7.05	0.63	
682	4.88		0.35	-	500	5.94	0.38	
789	4.41		0.36	-	600	5.30	0.35	
					700	4.79	0.35	
					800	(4.39)		
90.70	CREST; November 2, 1951; 0419 GCT; 32°06.5'N, 120°39'W; sounding, 2000 fm; wind, 350°, force 2; weather, clear; sea, slight; wire angle, 00°.							
0	18.00		5.30	0.66	0	18.00	5.30	0.66
10	17.54	33.26	5.32	0.60	10	17.54	5.32	0.60
25	17.17		5.30	0.58	20	17.30	5.31	0.58
50	14.02		5.83	0.70	30	17.09	5.35	0.58
75	12.41		5.49	0.94	50	14.02	5.83	0.70
98	10.84		4.61	1.34	75	12.41	5.49	0.94
151	9.40		3.13	-	100	10.74	4.55	1.36
197	8.50		2.49	2.18	150	9.44	3.16	1.77
291	7.50		1.15	2.81	200	8.44	2.44	2.21
390	6.99		0.55	3.07	250	7.85	1.65	2.59
485	5.98		0.44	3.11	300	7.45	1.07	2.84
586	5.36		0.28	3.22	400	6.90	0.52	3.08
781	4.56		0.29	3.23	500	5.86	0.43	3.12
974	3.99		0.55	-	600	5.29	0.28	3.22
1176	3.43		0.76	3.24	700	4.86	0.29	3.22
					800	4.50	0.31	3.23
					1000	3.91	0.59	3.24
93.27	CREST; November 1, 1951; 0559 GCT; 32°56'N, 117°19'W; sounding, 50 fm; wind, 160°, force 3; weather, clear; sea, slight; wire angle, 00°.							
0	17.46		-	0.54	0	17.46		0.54
10	17.46	33.25	5.03	0.54	10	17.46	5.03	0.54
25	16.64		5.24	0.56	20	16.65	5.21	0.56
50	14.10		5.43	0.58	30	15.86	5.29	0.57
					50	14.10	5.43	0.58

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
CREST; November 1, 1951; 0305 GCT; 32°50'N, 117°31'W; sounding, 520 fm; wind, 320°, force 3; weather, clear; sea, slight; wire angle, 05°.								93.30
0	18.11		5.68	0.51	0	18.11	5.68	0.51
10	18.10	33.34	5.32	0.54	10	18.10	5.32	0.54
25	17.28		5.61	0.55	20	18.06	5.55	0.55
50	12.94		5.50	0.82	30	15.96	5.62	0.56
77	11.30		4.82	1.18	50	12.94	5.50	0.82
99	10.68		4.43	1.38	75	11.42	4.88	1.15
150	10.15		2.17	-	100	10.66	4.41	1.39
196	9.66		2.06	2.28	150	10.15	2.17	2.02
293	8.09		1.71	-	200	9.60	2.04	(2.28)
389	7.25		1.11	2.74	250	8.80	1.91	(2.38)
483	6.64		0.54	2.92	300	8.00	1.68	(2.50)
583	5.75		0.31	3.12	400	7.16	1.02	2.76
677	5.40		0.27	3.18	500	6.51	0.47	2.95
779	4.86		0.31	-	600	5.67	0.29	3.14
880	4.44		0.38	-	700	5.29	0.27	
					800	4.76	0.32	
CREST; October 31, 1951; 1903 GCT; 32°14'N, 118°45.5'W; sounding, 1000 fm; wind, 360°, force 2; weather, overcast; sea, slight; wire angle, 08°.								93.50
0	17.85		5.23	0.54	0	17.85	5.23	0.54
10	17.82	33.19	5.33	0.52	10	17.82	5.33	0.52
25	17.84		5.41	0.54	20	17.83	5.39	0.53
50	16.70		5.55	0.54	30	17.86	5.43	0.53
75	13.25		5.94	0.70	50	16.70	5.55	0.54
98	11.26		5.33	-	75	13.25	5.94	0.70
149	9.42		3.89	-	100	11.14	5.29	
194	8.84		2.98	-	150	9.42	3.87	
288	7.74		1.88	2.53	200	8.77	2.90	
384	6.62		0.95	2.88u	250	8.18	2.30	
478	6.14		0.52	2.84	300	7.59	1.74	
576	5.47		0.36	3.02	400	6.53	0.86	
769	4.58		0.35	3.24	500	5.99	0.47	2.88
961	3.95		0.55	3.25	600	5.33	0.34	3.06
1163	3.42		0.69	3.13	700	4.84	0.31	3.18
					800	4.45	0.36	3.25
					1000	3.85	0.60	3.24
CREST; October 31, 1951; 0147 GCT; 32°15'N, 117°09'W; sounding, 29 fm; wind, 280°, force 3; weather, partly cloudy; sea, smooth; wire angle, 00°.								97.30
0	17.83		5.75	0.54	0	17.83	5.75	0.54
10	17.39	33.27	5.64	-	10	17.39	5.64	
25	14.50		5.57	-	20	14.92	5.61	
50	13.59		4.71	1.02	30	14.26	5.53	
					50	13.59	4.71	1.02

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
97.32	CREST; October 31, 1951; 0319 GCT; 32°11'N, 117°17'W; sounding, 820 fm; wind, 280°, force 3; weather, missing; sea, smooth; wire angle, 00°.							
0	18.72		5.36	0.54	0	18.72	5.36	0.54
10	18.72	33.35	4.79	-	10	18.72	4.79	0.59
25	17.32		5.66	0.56	20	17.87	5.12	0.58
50	14.22		6.04	-	30	16.78	5.84	0.56
75	11.80		5.12	1.02	50	14.22	6.04	0.63
99	10.66		4.76	1.50	75	11.80	5.12	1.02
151	10.16		2.46	2.21	100	10.65	4.74	1.50
200	9.48		2.17	-	150	10.18	2.46	2.21
303	8.25		1.42	2.61	200	9.48	2.17	(2.22)
411	7.00		0.93	2.95	250	8.83	1.82	(2.40)
515	6.22		0.47	2.99	300	8.30	1.44	(2.61)
620	5.62		0.32	-	400	7.11	0.99	2.92
830	4.69		0.27	3.28	500	6.33	0.52	2.99
1036	3.62		0.76	3.22	600	5.74	0.35	(3.08)
1242	3.28		0.86	-	700	5.24	0.28	(3.19)
					800	4.81	0.27	(3.27)
					1000	3.77	0.70	3.22
97.40	CREST; October 31, 1951; 0829 GCT; 31°55'N, 117°50'W; sounding, 1000 fm; wind, 010°, force 2; weather, missing; sea, smooth; wire angle, 00°.							
0	17.68		5.42	0.54	0	17.68	5.42	0.54
10	17.68	33.21	5.39	0.48	10	17.68	5.39	0.48
25	17.12		5.45	0.48	20	17.57	5.41	0.48
50	14.08		5.91	0.55	30	16.65	5.60	0.48
75	11.78		5.52	-	50	14.08	5.91	0.55
99	10.33a)		4.66	1.41	75	11.78	5.52	1.00
152	9.04		3.39	1.81	100	10.30	4.60	1.42
199	8.64		2.50	2.02	150	9.12	3.44	1.80
297	7.88		1.38	-	200	8.62	2.48	2.03
393	7.18		0.74	2.76	250	8.23	1.87	2.36
488	6.43		0.43	3.12	300	7.85	1.35	2.56
589	5.82		0.28	3.29	400	7.11	0.71	2.79
786	4.86		0.33	-	500	6.35	0.40	3.15
982	4.16		0.49	3.41	600	5.76	0.28	(3.29)
1183	3.51		0.71	-	700	5.24	0.30	
					800	4.80	0.34	
					1000	4.10	0.51	
97.50	CREST; October 31, 1951; 1314 GCT; 31°39'N, 118°22'W; sounding, 770 fm; wind, 320°, force 2; weather, missing; sea, slight; wire angle, 10°.							
0	18.50		5.12	0.50	0	18.50	5.12	0.50
10	18.53	33.34	5.12	0.57	10	18.53	5.12	0.57
25	18.20		5.11	0.60	20	18.52	5.12	0.59
49	14.80		5.87	0.62	30	17.26	5.15	0.61
73	12.85		5.52	0.82	50	14.72	5.85	0.62
97	10.80		4.49	1.32	75	12.70	5.44	0.85
147	10.04		2.51	2.08	100	10.75	4.36	1.40
193	9.85		1.67	-	150	10.00	2.44	(2.10)
283	8.94		1.22	2.62	200	9.82	1.61	(2.34)
380	7.61		0.91	2.88	250	9.35	1.31	(2.51)
472	6.50		0.47	2.76u	300	8.72	1.17	2.67
571	5.96		0.35	-	400	7.33	0.80	
762	5.02		0.29	-	500	6.30	0.42	
954	4.07		0.54	3.23	600	5.83	0.32	
1158	3.60		0.70	3.09	700	5.30	0.28	
					800	4.83	0.33	
					1000	3.95	0.60	

a) Alternate value, 9.92°C, not used in interpolation.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; October 30, 1951; 1720 GCT; 31°42'N, 116°43.5'W; sounding, 50 fm; wind, 150°, force 1; weather, cloudy; sea, slight; wire angle, 00°. 100.29

0	17.02		5.31	0	17.02	5.31
10	-	33.35	5.23	10	16.8	5.23
25	-		4.41	20	16.7	4.45
48	15.35		4.45	30	16.6	4.41
72	14.05		3.67	50	15.15	4.45
				75	(14.00)	(3.59)

BLACK DOUGLAS; October 30, 1951; 1905 GCT; 31°40.5'N, 116°46.5'W; sounding, 250 fm; wind, 180°, force 1; weather, cloudy; sea, slight; wire angle, 01°. 100.30

0	17.30		5.34	0	17.30	5.34
10	17.10	33.31	5.55	10	17.10	5.55
24	15.79		5.60	20	16.40	5.60
48	14.38		4.71	30	15.31	5.58
72	13.72		3.68	50	14.27	4.59
95	12.90		3.55	75	13.65	3.63
146	11.00		2.55	100	12.67	3.50
193	9.86		1.87	150	10.88	2.48
241	9.48		1.72	200	9.79	1.84
288	8.91		1.53	250	9.38	1.70
341	8.47		1.33	300	8.76	1.49
390	7.89		-	400	(7.82)	

BLACK DOUGLAS; November 1, 1951; 0839 GCT; 31°21'N, 117°27'W; sounding, 1050 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 06°. 100.40

0	17.84		5.24	0	17.84	5.24
10	17.81	33.29	5.32	10	17.81	5.32
25	17.73		5.18	20	17.77	5.20
49	13.74		5.44	30	17.20	5.21
73	11.49		5.21	50	13.65	5.44
97	10.41		4.43	75	11.40	5.20
147	9.16		3.40	100	10.23	4.30
193	8.60		2.64	150	9.10	3.35
284	7.77		1.24	200	8.52	2.53
381	7.06		0.77	250	8.08	1.65
473	6.54		0.49	300	7.65	1.13
570	5.95		0.38	400	6.95	0.70
761	4.83		0.33	500	6.40	0.44
949	4.18		0.52	600	5.75	0.35
1149	3.52		0.66	700	5.14	0.31
				800	4.67	0.34
				1000	4.01	0.59

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

100.50 BLACK DOUGLAS; November 1, 1951; 1535 GCT; 31°01'N, 118°07'W; sounding, 980 fm; wind, 320°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

0	18.43		5.24	0	18.43	5.24
10	18.42	33.40	5.17	10	18.42	5.17
25	18.39		5.22	20	18.41	5.19
50	14.58		5.74	30	17.70	5.40
74	12.02		5.05	50	14.58	5.74
98	11.22		4.55	75	12.00	5.04
149	9.86		2.91	100	11.15	4.50
197	9.72		2.10	150	9.86	2.90
288	8.29		1.34	200	9.71	2.06
387	7.38		0.76	250	9.00	1.60
480	6.59		0.40	300	8.17	1.26
580	5.90		0.34	400	7.25	0.70
773	4.86		0.33	500	6.45	0.38
966	4.18		0.56	600	5.78	0.34
1168	3.66		0.66	700	5.22	0.33
				800	4.75	0.35
				1000	4.09	0.59

100.60 BLACK DOUGLAS; November 1, 1951; 2153 GCT; 30°41'N, 118°47.5'W; sounding, 1560 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 04°.

0	19.08		5.04	0	19.08	5.04
10	19.04	33.55	5.01	10	19.04	5.01
25	19.05		5.02	20	19.05	5.01
50	18.86		5.24	30	19.06	5.05
75	16.46		5.52	50	18.86	5.24
98	15.10		5.35	75	16.46	5.52
151	11.10		4.68	100	15.01	5.32
196	9.30		3.75	150	11.17	4.69
287	7.94		2.60	200	9.20	3.69
383	6.84		1.13	250	8.39	3.06
475	6.33		0.63	300	7.80	2.39
571	5.82		0.34	400	6.74	1.03
763	4.94		0.30	500	6.19	0.55
954	4.09		0.54	600	5.69	0.32
1155	3.57		0.72	700	5.23	0.30
				800	4.78	0.32
				1000	3.95	0.62

100.70 BLACK DOUGLAS; November 2, 1951; 0433 GCT; 30°20.5'N, 119°27'W; sounding, 2120 fm; wind, 320°, force 2; weather, overcast; sea, slight; wire angle, 00°.

0	19.15		4.64	0	19.15	4.64
10	19.14	33.55	4.11	10	19.14	4.11
25	19.14		4.38	20	19.14	4.32
50	19.16		4.43	30	19.14	4.40
74	16.12		5.64	50	19.16	4.43
98	13.43		5.15	75	16.00	5.64
150	10.34		4.41	100	13.20	5.10
197	9.46		3.27	150	10.34	4.41
292	7.96		2.19	200	9.40	3.21
390	6.75		1.09	250	8.59	2.65
483	6.16		0.71	300	7.88	2.11
582	5.51		0.37	400	6.68	1.03
776	4.82		0.33	500	6.07	0.64
966	4.12		0.57	600	5.42	0.37
1168	3.62		0.75	700	5.04	0.35
				800	4.74	0.35
				1000	4.02	0.62

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; November 2, 1951; 1121 GCT; 30°01'N, 120°07'W; sounding, 2120 fm; wind, 340°, force 2; weather, overcast; sea, moderate; wire angle, 00°. 100.80

0	18.88		5.21	0	18.88	5.21
10	18.86	33.57	5.25	10	18.86	5.25
25	18.86		5.24	20	18.86	5.26
50	13.14		5.97	30	18.85	5.28
74	10.45		4.33	50	13.14	5.97
99	9.68		3.57	75	10.40	4.30
151	9.22		2.85	100	9.66	3.55
196	8.51		2.30	150	9.23	2.86
290	7.38		1.58	200	8.45	2.25
388	6.57		0.66	250	7.82	2.87
482	5.38		0.57	300	7.29	2.24
581	5.02		0.37	400	6.43	1.49
774	4.42a)		0.38	500	5.29	0.62
965	3.90		0.70	600	4.97	0.54
1166	3.50		0.69	700	4.64	0.37
				800	4.33	0.38
				1000	3.84	0.40
				1200		(0.70)

BLACK DOUGLAS; October 31, 1951; 0106 GCT; 31°05'N, 116°25'W; sounding, 40 fm; wind, 240°, force 1; weather, cloudy; sea, slight; wire angle, 00°. 103.30

0	18.90		4.82	0	18.90	4.82
10	18.63	33.49	5.05	10	18.63	5.05
25	17.04		5.28	20	17.96	5.25
50	14.90		4.32	30	16.60	5.28
				50	14.90	4.32

BLACK DOUGLAS; October 31, 1951; 0500 GCT; 30°55.5'N, 116°45'W; sounding, 1060 fm; wind, 300°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°. 103.35

0	18.92		2.76	0	18.92	2.76
10	18.91	33.59	3.56	10	18.91	3.56
25	18.33		2.95	20	18.62	2.99
50	14.18		3.47	30	17.91	2.98
74	12.16		3.84	50	14.18	3.47
98	10.85		2.53	75	12.10	3.84
150	10.93		1.18	100	10.84	2.41
197	9.74		0.55	150	10.93	1.18
291	8.40		1.22	200	9.65	0.56
389	7.37		0.62	250	8.93	1.07
484	6.62		0.44	300	8.30	1.19
582	5.82		0.32	400	7.26	0.60
775	4.81b)		0.32	500	6.50	0.42
967	4.07		0.57	600	5.72	0.32
1168	3.50		0.63	700	5.16	0.32
				800	4.69	0.34
				1000	3.94	0.60

a) Alternate value, 4.29°C, not used in interpolation.
b) Alternate value, 5.04°C, not used in interpolation.

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

103.40 BLACK DOUGLAS; November 1, 1951; 0130 GCT; 30°45.5'N, 117°05.5'W; sounding, 900 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 04°.

0	18.74		4.87	0	18.74	4.87
10	18.70	33.40	4.86	10	18.70	4.86
25	18.09		5.03	20	18.57	4.98
49	14.17		5.18	30	17.38	5.08
73	12.12		4.58	50	14.10	5.18
96	10.81		3.99	75	12.08	4.55
148	9.46		2.74	100	10.63	3.89
194	8.54		2.51	150	9.39	2.72
287	7.84		1.35	200	8.49	2.48
385	7.09		0.60	250	8.11	1.89
479	6.41		0.42	300	7.75	1.22
577	5.80		0.34	400	6.97	0.56
769	4.82		0.37	500	6.27	0.40
959	4.10		0.57	600	5.65	0.35
1159	3.58		0.77	700	5.14	0.37
				800	4.70	0.39
				1000	3.97	0.63

107.32 BLACK DOUGLAS; October 31, 1951; 1209 GCT; 30°26'N, 116°11'W; sounding, 300 fm; wind, 340°, force 3; weather, partly cloudy; sea, moderate; wire angle, 00°.

0	18.46		5.17	0	18.46	5.17
10	18.36	33.45	5.28	10	18.36	5.28
24	17.71		5.36	20	18.02	5.35
48	15.72		-	30	17.21	5.35
71	14.84		3.72	50	15.58	4.75
94	13.42		3.18	75	14.60	3.60
145	10.33		3.01	100	13.05	3.11
192	10.17		1.95	150	10.33	2.97
239	9.52		1.25	200	10.10	1.80
286	8.88		0.95	250	9.35	1.15
339	7.96		0.81	300	8.65	0.90
387	7.42		0.73	400	7.29	0.72
436	6.96		0.65	500	(6.65)	(0.66)
485	6.62		0.66			

107.35 BLACK DOUGLAS; October 31, 1951; 1510 GCT; 30°20'N, 116°23'W; sounding, 620 fm; wind, 340°, force 3; weather, overcast; sea, moderate; wire angle, 00°.

0	19.28		5.74	0	19.28	5.74
10	19.28	33.78	5.15	10	19.28	5.15
25	18.31		5.04	20	19.25	5.08
50	15.58		3.79	30	17.55	5.00
74	13.66		3.59	50	15.58	3.79
98	12.72		2.66	75	13.60	3.58
150	10.77		2.51	100	12.61	2.62
196	9.72		2.43	150	10.77	2.51
290	8.51		1.70	200	9.63	2.43
388	7.54		-	250	8.98	2.05
483	6.75		0.49	300	8.39	1.63
581	5.78		0.29	400	7.45	0.91
675	5.32		0.30	500	6.58	0.44
775	4.58		0.39	600	5.67	0.30
970	4.06		0.54	700	5.13	0.30
				800	4.48	0.44
				1000	(4.00)	(0.57)

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; October 31, 1951; 1905 GCT; 30°10.5'N, 116°43.5'W; sounding, 1520 fm; wind, 320°, force 3; weather, partly cloudy; sea, moderate; wire angle, 05°. 107.40

0	18.25		5.43	0	18.25	5.43
10	18.22	33.54	5.36	10	18.22	5.36
25	16.41		5.11	20	17.30	5.20
49	13.72		4.17	30	15.85	4.97
73	12.91		3.22	50	13.70	4.14
96	11.56		3.18	75	12.84	3.21
147	11.40		1.31	100	11.53	3.16
193	9.79		1.54	150	11.33	1.30
286	8.40		1.48	200	9.66	1.57
383	7.35		0.85	250	8.89	1.56
476	6.50		0.47	300	8.21	1.39
574	5.94		0.33	400	7.19	0.76
767	4.79		0.33	500	6.34	0.41
959	4.12		0.54	600	5.81	0.33
1158	3.52		0.77	700	5.16	0.33
				800	4.65	0.35
				1000	4.03	0.62

BLACK DOUGLAS; November 4, 1951; 0448 GCT; 29°50.5'N, 115°52'W; sounding, 40 fm; wind, 340°, force 2; weather, clear; sea, moderate; wire angle, 00°. 110.33

0	18.34		5.23	0	18.34	5.23
10	17.98	33.73	5.25	10	17.98	5.25
25	17.75		4.51u	20	17.81	
49	14.45		5.25	30	17.74	

BLACK DOUGLAS; November 4, 1951; 0211 GCT; 29°46.5'N, 116°00'W; sounding, 700 fm; wind, 320°, force 2; weather, clear; sea, slight; wire angle, 13°. 110.35

0	19.63		4.96	0	19.63	4.96
9	19.59	33.65	5.16	10	19.60	5.16
24	19.60		4.99	20	19.60	5.00
48	15.14		5.58	30	19.60	5.03

BLACK DOUGLAS; November 3, 1951; 2153 GCT; 29°36.5'N, 116°19.5'W; sounding, 860 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 07°. 110.40

0	19.30		4.99	0	19.30	4.99
10	18.91	33.42	5.03	10	18.91	5.03
25	18.90		5.09	20	18.90	5.09
49	16.07		5.55	30	18.90	5.10
73	12.76		4.60	50	16.05	5.55
98	11.43		4.75u	75	12.65	4.57
149	9.53		2.91	100	11.22	3.95
196	9.34		2.12	150	9.53	2.90
288	8.60		1.22	200	9.32	2.08
385	7.96		0.53	250	8.91	1.56
477	6.87		0.48	300	8.53	1.09
573	6.14		0.28	400	7.74	0.51
763	4.73		0.37	500	6.70	0.41
954	3.98		0.65	600	5.90	0.28
1155	3.50		0.78	700	5.14	0.32
				800	4.56	0.40
				1000	3.82	0.69

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

110.50

BLACK DOUGLAS; November 3, 1951; 1542 GCT; 29°16.5'N, 116°59'W; sounding, 1720 fm; wind, 360°, force 2; weather, cloudy; sea, slight; wire angle, 00°.

0	18.56		4.92	0	18.56	4.92
10	18.55	33.39	4.78	10	18.55	4.78
25	18.52		4.78	20	18.53	4.78
50	15.58		5.19	30	18.45	4.81
74	13.27		4.99	50	15.58	5.19
98	11.07		4.33	75	13.23	4.97
150	9.50		3.04	100	10.98	4.27
196	8.76		2.54	150	9.50	3.04
289	7.56		1.85	200	8.69	2.50
387	6.88		0.81	250	8.04	2.13
481	6.46		0.48	300	7.47	1.74
580	5.76		0.30	400	6.80	0.75
773	4.79		0.33	500	6.35	0.42
965	4.10		0.72	600	5.64	0.30
1167	3.58		0.71	700	5.11	0.31
				800	4.70	0.36
				1000	3.99	0.71

110.60

BLACK DOUGLAS; November 3, 1951; 0837 GCT; 28°56.5'N, 117°39'W; sounding, 2000 fm; wind, 360°, force 1; weather, partly cloudy; sea, slight; wire angle, 05°.

0	18.62		5.11	0	18.62	5.11
10	18.62	33.37	5.00	10	18.62	5.00
25	18.62		5.26	20	18.62	5.20

115.27

BLACK DOUGLAS; November 4, 1951; 1400 GCT; 29°11'N, 114°55'W; sounding, 45 fm; wind, calm; weather, partly cloudy; sea, slight; wire angle, 00°.

0	20.18		4.43	0	20.18	4.43
10	20.14	33.81	4.38	10	20.14	4.38
25	19.82		4.40	20	20.00	4.39
50	-		4.25	30		4.40
				50		4.25

115.30

BLACK DOUGLAS; November 4, 1951; 1613 GCT; 29°05'N, 115°08'W; sounding, 53 fm; wind, 320°, force 1; weather, cloudy; sea, slight; wire angle, 00°.

0	19.55		4.92	0	19.55	4.92
10	19.53	33.83	4.83	10	19.53	4.83
25	19.02		4.72	20	19.52	4.77
50	15.70		4.19	30	18.28	4.68
76	14.15		3.37	50	15.70	4.19
				75	14.20	3.40

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; November 4, 1951; 1946 GCT; 28°55'N, 115°27.5'W; sounding, 610 fm; wind, 320°, force 3; weather, cloudy; sea, slight; wire angle, 02°. 115.35

0	20.01		4.91	0	20.01	4.91
10	19.91	33.85	4.97	10	19.91	4.97
25	19.90		4.96	20	19.90	4.96
49	16.90		4.91	30	19.90	4.95
73	14.15		4.32	50	16.50	4.90
96	12.60		3.09	75	14.00	4.30
147	11.74		1.14	100	12.50	2.85
194	10.85		1.28	150	11.68	1.13
288	9.14		1.06	200	10.72	1.28
385	8.10		0.67	250	9.76	1.19
478	7.12		0.37	300	9.00	1.00
576	6.22		0.30	400	7.93	0.62
670	5.44		0.29	500	6.91	0.33
771	4.86		0.34	600	6.01	0.30
967	4.16		0.51	700	5.23	0.30
				800	4.73	0.38
				1000	(4.05)	(0.52)

BLACK DOUGLAS; November 5, 1951; 0008 GCT; 28°45'N, 115°47'W; sounding, 680 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 11°. 115.40

0	19.83		5.08	0	19.83	5.08
10	19.72	33.61	5.04	10	19.72	5.04
24	19.55		5.13	20	19.60	5.09
48	16.80		5.50	30	19.55	5.20
73	13.48		5.23	50	16.60	5.50
95	13.07		2.91	75	13.26	5.20
144	11.90		1.89	100	13.06	2.47
190	10.64		2.03	150	11.71	1.89
280	9.36		1.18	200	10.47	2.01
375	8.33		0.68	250	9.74	1.45
465	7.48		0.41	300	9.11	1.03
563	6.54		0.26	400	8.09	0.59
655	5.77		0.17	500	7.13	0.34
754	5.04		0.31	600	6.21	0.21
948	4.34		0.49	700	5.42	0.20
				800	4.82	0.37
				1000	(4.19)	

BLACK DOUGLAS; November 5, 1951; 1116 GCT; 28°23'N, 114°14.5'W; sounding, 36 fm; wind, 320°, force 2; weather, clear; sea, moderate; wire angle, 00°. 120.25

0	20.26		4.91	0	20.26	4.91
10	20.24	33.82	4.91	10	20.24	4.91
25	20.27		4.89	20	20.24	4.90
50	18.22		3.52	30	20.26	4.85
				50	18.22	3.52

BLACK DOUGLAS; November 5, 1951; 1443 GCT; 28°13'N, 114°34'W; sounding, 50 fm; wind, 330°, force 3; weather, cloudy; sea, moderate; wire angle, 00°. 120.30

0	20.89		4.58	0	20.89	4.58
10	20.88	33.95	4.67	10	20.88	4.67
25	20.85		4.71	20	20.86	4.70
50	17.98		4.64	30	20.85	4.71
75	15.47		3.44	50	17.98	4.64
				75	15.47	3.44

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

120.35 BLACK DOUGLAS; November 5, 1951; 1838 GCT; 28°03'N, 114°54'W; sounding, 44 fm; wind, 330°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

0	21.01		4.81	0	21.01	4.81
10	20.92	33.95	4.74	10	20.92	4.74
25	20.87		4.90	20	20.88	4.87
50	19.87		4.30	30	20.85	4.89
				50	19.87	4.30

120.45 BLACK DOUGLAS; November 6, 1951; 0018 GCT; 27°43'N, 115°33'W; sounding, 1200 fm; wind, 320°, force 4; weather, overcast; sea, moderate; wire angle, 02°.

0	22.36		4.67	0	22.36	4.67
10	22.36	34.04	4.82	10	22.36	4.82
25	22.50		4.88	20	22.48	4.88
50	16.24		5.31	30	22.50	4.89
74	13.58		4.18	50	16.24	5.31
98	12.70		2.98	75	13.54	4.17
151	11.68		1.34	100	12.63	2.87
198	10.63		1.16	150	11.71	1.35
292	9.26		0.75	200	10.58	1.14
391	8.14		0.76	250	9.81	0.93
484	6.97		0.33	300	9.18	0.72
582	6.30		0.26	400	8.02	0.73
775	5.17		0.19	500	6.83	0.30
965	4.26		0.49	600	6.20	0.25
1167	3.70		0.69	700	5.62	0.22
				800	5.02	0.21
				1000	4.14	0.54

120.50 BLACK DOUGLAS; November 6, 1951; 0430 GCT; 27°33'N, 115°52.5'W; sounding, 2060 fm; wind, 330°, force 3; weather, cloudy; sea, moderate; wire angle, 15°.

0	22.22		4.78	0	22.22	4.78
10	22.22	34.17	4.78	10	22.22	4.78
24	22.20		4.73	20	22.20	4.74
47	15.66		5.48	30	20.88	4.77
69	12.96		4.67	50	14.97	5.48
91	11.76		-	75	12.57	4.42
140	10.06		2.71	100	11.40	3.71
183	9.24		2.66	150	9.77	2.67
270	9.09		0.83	200	9.18	2.40
363	8.12		0.49	250	9.12	1.02
451	7.04		0.31	300	8.81	0.72
544	6.32		0.28	400	7.63	0.40
730	5.10		0.30	500	6.63	0.28
915	4.45		0.23u	600	5.96	0.28
1111	3.78		0.62	700	5.30	0.28
				800	4.76	0.35
				1000	4.15	0.50

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

120.60

BLACK DOUGLAS; November 6, 1951; 1508 GCT; 27°13'N, 116°31.5'W; sounding, 2140 fm; wind, 340°, force 4; weather, cloudy; sea, rough; wire angle, 19°.

0	20.36		4.64	0	20.36	4.64
11	20.34	33.68	4.60	10	20.34	4.60
25	20.35		5.19	20	20.34	4.85
49	17.26		5.38	30	20.35	5.30
71	14.86		5.02	50	17.19	5.38
92	12.63		5.03	75	14.61	5.03
141	10.14		3.38	100	11.66	5.00
183	9.55		2.59	150	9.99	3.17
268	8.63		1.49	200	9.37	2.35
358	7.54		0.84	250	8.81	1.70
443	-		0.41	300	8.20	1.22
531	6.29		0.26	400	7.24	0.60
709	5.08		0.33	500	6.54	0.30
892	4.33		-	600	5.79	0.26
1086	3.80		0.65	700	5.13	0.32
				800	4.68	0.41
				1000	4.02	0.55

120.70

BLACK DOUGLAS; November 6, 1951; 2136 GCT; 26°52.5'N, 117°10'W; sounding, 2140 fm; wind, 350°, force 4; weather, partly cloudy; sea, rough; wire angle, 12°.

0	21.09		4.76	0	21.09	4.76
10	21.02	33.86	4.81	10	21.02	4.81
24	20.84		4.83	20	20.88	4.83
48	17.39		5.63	30	20.83	4.86
72	14.47		5.78	50	16.89	5.69
96	11.89		4.91	75	14.00	5.75
146	9.96		3.38	100	11.65	4.71
190	9.67		2.00	150	9.91	3.24
279	9.10		1.00	200	9.62	1.83
373	7.76		0.63	250	9.30	1.25
462	6.76		0.41	300	8.90	0.89
553	6.10		0.31	400	7.44	0.55
740	4.92		0.41	500	6.48	0.36
927	4.25		0.57	600	5.78	0.31
1125	3.74		0.69	700	5.12	0.37
				800	4.67	0.45
				1000	4.02	0.62

120.80

BLACK DOUGLAS; November 7, 1951; 0416 GCT; 26°32.5'N, 117°48.5'W; sounding, 2160 fm; wind, 360°, force 2; weather, partly cloudy; sea, moderate; wire angle, 14°.

0	19.87		5.11	0	19.87	5.11
10	19.84	33.58	4.90	10	19.84	4.90
24	19.86		5.06	20	19.84	4.99
48	15.70		5.76	30	19.86	5.30
71	12.30		4.69	50	14.50	5.76
94	11.37		3.80	75	12.15	4.50
142	9.49		3.14	100	10.62	3.68
186	9.45		1.91	150	9.48	3.00
272	8.73		1.06	200	9.40	1.70
363	7.53		1.82u	250	8.98	1.22
451	6.76		0.47	300	8.36	0.93
543	6.22		0.31	400	7.18	0.61
725	5.10		0.31	500	6.50	0.36
911	4.44		0.48	600	5.83	0.30
1110	3.78		0.65	700	5.22	0.30
				800	4.84	0.35
				1000	4.10	0.59

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

120.90

BLACK DOUGLAS; November 7, 1951; 1043, 1216 GCT; 26°13'N, 118°27.5'W; sounding, 2240 fm; wind, 010°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°, 05°.

0	20.90		4.97	0	20.90	4.97
10	20.90	33.81	5.02	10	20.90	5.02
25	20.90		4.94	20	20.90	4.99
50	18.08		5.44	30	20.90	4.99
74	14.32		5.55	50	18.08	5.44
98	12.38		4.36	75	13.85	5.55
150	11.88		1.48	100	12.32	4.00
196	10.91		1.02	150	11.88	1.48
289	9.74		0.33	200	10.87	1.00
387	8.36		0.28	250	10.22	0.59
481	7.40		0.20	300	9.57	0.31
579	6.54		0.23	400	8.19	0.26
772	5.36		0.29	500	7.25	0.19
965	4.47		0.41	600	6.39	0.24
1165	3.82		0.77	700	5.75	0.27
				800	5.23	0.30
590a)	6.38		0.24	1000	4.36	0.40
979	4.37		0.40	1200	3.68	0.65
1164	3.78		0.59	1500	2.92	1.02
1442	3.07		0.98	2000	2.19	1.78
1673	2.66		1.27	2500	1.82	2.26
1908	2.28		1.62			
2142	2.08		1.88			
2381	1.89		2.16			
2622	1.79		2.27			
2871	1.70		2.51			

123.37

BLACK DOUGLAS; November 11, 1951; 1125 GCT; 27°35'N, 114°51'W; sounding, 40 fm; wind, 010°, force 2; weather, overcast; sea, moderate; wire angle, 00°.

0	22.86		4.51	0	22.86	4.51
10	22.80	34.46	4.47	10	22.80	4.47
25	22.82		4.47	20	22.81	4.47
50	21.92		4.31	30	22.82	4.45
				50	21.92	4.31

123.40

BLACK DOUGLAS; November 11, 1951; 0656 GCT; 27°25'N, 114°56'W; sounding, 300 fm; wind, 030°, force 3; weather, overcast; sea, rough; wire angle, 00°.

0	23.05		4.61	0	23.05	4.61
10	23.09	34.42	4.58	10	23.09	4.58
24	23.11		4.44	20	23.10	4.46
48	18.94		5.30	30	23.11	4.46
72	-		5.42	50	18.25	5.32
95	13.45		4.14	75	15.10	5.42
147	12.08		1.00	100	13.20	3.65
195	11.48		0.79	150	12.03	0.97
242	10.45		0.65	200	11.40	0.78
290	9.56		0.65	250	10.27	0.65
				300	(9.41)	(0.65)

127.34

BLACK DOUGLAS; November 10, 1951; 1938 GCT; 26°55.5'N, 114°06'W; sounding, 47 fm; wind, 270°, force 1; weather, overcast; sea, moderate; wire angle, 00°.

0	24.04		4.53	0	24.04	4.53
10	24.05	34.68	4.40	10	24.05	4.40
25	24.02		4.41	20	24.02	4.40
49	21.84		4.42	30	24.02	4.42

a) Overlapping casts; reconciliation of property curves when necessary.

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; November 10, 1951; 2321 GCT; 26°43.5'N, 114°29.5'W; sounding, 1800 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 00°. 127.40

0	22.84		4.80	0	22.84	4.80
10	22.80	34.18	4.80	10	22.80	4.80
25	22.64		4.76	20	22.67	4.76
50	20.14		5.06	30	22.62	4.76
74	14.55		3.73u	50	20.14	5.06
98	12.24		3.76u	75	14.20	
149	11.40		1.52	100	12.20	
195	10.83		0.95	150	11.39	1.50
288	9.84		0.56	200	10.79	0.92
387	8.39		0.36	250	10.24	0.69
480	7.41		0.23	300	9.68	0.52
578	6.38		0.21	400	8.25	0.33
771	5.06		0.41	500	7.19	0.22
963	4.23		0.52	600	6.17	0.22
1163	3.65		0.67	700	5.48	0.31
				800	4.90	0.43
				1000	4.10	0.54

BLACK DOUGLAS; November 9, 1951; 0927 GCT; 26°29'N, 113°29'W; sounding, 42 fm; wind, 060°, force 1; weather, cloudy; sea, slight; wire angle, 00°. 130.30

0	24.62		4.33	0	24.62	4.33
10	24.61	34.67	4.50	10	24.61	4.50
25	24.59		3.82	20	24.60	4.20
50	22.61		3.42	30	24.54	3.65
				50	22.61	3.42

BLACK DOUGLAS; November 9, 1951; 0615 GCT; 26°19'N, 113°48.5'W; sounding, 160 fm; wind, 320°, force 2; weather, cloudy; sea, slight; wire angle, 00°. 130.35

0	23.35		4.49	0	23.35	4.49
10	23.34	34.13	4.64	10	23.34	4.64
25	23.31		4.38	20	23.32	4.52
50	20.96		4.83	30	23.31	4.38
74	16.48		4.89	50	20.96	4.83
98	14.13		4.37	75	16.36	4.89
149	12.95		1.41	100	14.05	4.22
194	12.17		0.56	150	12.92	1.32
239	11.04		0.59	200	12.05	0.54

BLACK DOUGLAS; November 9, 1951; 0102 GCT; 26°09'N, 114°07.5'W; sounding, 1600 fm; wind, 320°, force 2; weather, partly cloudy; sea, slight; wire angle, 01°. 130.40

0	23.20		4.49	0	23.20	4.49
10	22.97	34.22	4.51	10	22.97	4.51
25	22.89		4.61	20	22.90	4.58
50	18.66		5.38	30	22.89	4.70
74	14.61		4.58	50	18.66	5.38
98	12.42		3.15	75	14.56	4.50
150	10.33		2.37	100	12.02	3.10
197	10.34		1.09	150	10.33	2.37
291	9.65		0.41	200	10.32	1.05
388	8.16		0.36	250	10.04	0.60
481	7.35		0.23	300	9.54	0.40
578	6.21		0.21	400	8.07	0.34
770	5.08		0.25	500	7.10	0.22
961	4.35		0.42	600	6.05	0.21
1161	3.75		0.59	700	5.44	0.22
				800	4.94	0.26
				1000	4.23	0.48

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OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

130.50 BLACK DOUGLAS; November 8, 1951; 1836 GCT; 25°49'N, 114°46'W; sounding, 2020 fm; wind, 360°, force 1; weather, partly cloudy; sea, slight; wire angle, 00°.

0	22.61		4.51	0	22.61	4.51
10	22.44	34.19	4.56	10	22.44	4.56
25	22.34		4.56	20	22.35	4.56
50	16.57		5.46	30	22.32	4.57
75	13.83		4.23	50	16.57	5.46
100	12.30		2.70	75	13.83	4.23
150	10.52		1.69	100	12.30	2.70
198	10.62		0.78	150	10.52	1.69
290	9.36		0.37	200	10.63	0.76
387	8.08		0.30	250	10.00	0.50
480	6.98		0.25	300	9.20	0.35
577	6.15		0.20	400	7.89	0.30
770	4.94		0.30	500	6.78	0.23
959	4.14		0.51	600	5.98	0.20
1161	3.62		0.71	700	5.32	0.23
				800	4.79	0.33
				1000	4.00	0.58

130.60 BLACK DOUGLAS; November 8, 1951; 1120 GCT; 25°29'N, 115°29'W; sounding, 2140 fm; wind, 330°, force 1; weather, clear; sea, slight; wire angle, 02°.

0	22.73		4.33	0	22.73	4.33
10	22.71	34.13	4.56	10	22.71	4.56
25	22.67		4.56	20	22.68	4.55
50	16.61		4.94	30	22.67	4.56
73	13.34		3.25	50	16.61	4.94
97	11.66		2.44	75	13.10	3.12
148	10.78		1.58	100	11.52	2.39
193	10.51		1.15	150	10.75	1.55
286	9.92		0.52	200	10.47	1.10
383	9.37		0.23	250	10.15	0.76
475	7.92		0.17	300	9.83	0.46
573	6.42		0.21	400	9.20	0.21
765	4.76		0.34	500	7.52	0.18
955	3.85		0.59	600	6.15	0.22
1154	3.30		0.73	700	5.25	0.30
				800	4.57	0.37
				1000	3.70	0.63

133.25 BLACK DOUGLAS; November 9, 1951; 1601 GCT; 26°04.5'N, 112°48'W; sounding, 46 fm; wind, 360°, force 3; weather, cloudy; sea, moderate; wire angle, 00°.

0	25.29		4.38	0	25.29	4.38
10	25.37	34.68	4.42	10	25.37	4.42
26	24.63		4.59	20	24.70	4.52
50	19.99		4.97	30	24.63	4.65
76	17.96		2.69	50	19.99	4.97
				75	18.00	2.68

OBSERVED				INTERPOLATED		
Z m	T °C	S ‰	O_2 ml/L	Z m	T °C	O_2 ml/L

BLACK DOUGLAS; November 10,1951; 0911 GCT; 25°54.5'N, 113°07.5'W; sounding, 100 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 04°. 133.30

0	24.18		4.17	0	24.18	4.17
10	24.19	34.60	4.53	10	24.19	4.53
25	24.19		4.70	20	24.19	4.69
49	23.43		4.59	30	24.19	4.69
72	17.74		4.70	50	23.40	4.58
94	16.57		2.14	75	17.53	4.70
116	14.08		1.02	100	16.20	1.79
144	13.49		0.33	150	(13.38)	(0.31)

BLACK DOUGLAS; November 9, 1951; 2226 GCT; 25°34'N, 112°18.5'W; sounding, 43 fm; wind, calm; weather, cloudy; sea, slight; wire angle, 00°. 137.23

0	26.28		4.37	0	26.28	4.37
10	26.02	34.83	4.36	10	26.02	4.36
24	25.98		4.36	20	26.00	4.35
48	24.70		4.26	30	25.03	4.34

BLACK DOUGLAS; November 10, 1951; 0310 GCT; 25°20'N, 112°45.5'W; sounding, 130 fm; wind, 280°, force 2; weather, overcast; sea, slight; wire angle, 00°. 137.30

0	25.26		4.34	0	25.26	4.34
10	25.30	34.68	4.44	10	25.30	4.44
25	25.27		4.47	20	25.28	4.48
49	21.10		4.01	30	25.22	4.46
73	17.57		3.42	50	20.90	3.99
97	15.61		1.83	75	17.20	3.38
149	13.66		0.48	100	15.49	1.63
195	12.52		0.20	150	13.62	0.47
				200	(12.42)	(0.20)

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

60.55

YELLOWFIN; November 26, 1951; 1513 GCT; 37°47.5'N, 123°15'W; sounding, 60 fm; wind, 140°, force 6; weather, rain showers; sea, very rough; wire angle, 31°.

60.60

0	13.32		0	13.32
8	13.32	33.30	10	13.32
17	13.31		20	13.28
26	13.24		30	13.18
43	11.76		50	11.45
64	10.92		75	10.55
83	10.35			

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

YELLOWFIN; November 26, 1951; 1045 GCT; 37°37'N, 123°37'W; sounding, 1700 fm; wind, 140°, force 6; weather, rain showers; sea, very rough; wire angle, 34°.

0	13.82		0	13.82
8	13.84	33.28	10	13.83
20	13.81		20	13.81
45	11.86		30	13.81
65	10.38		50	11.24
85	9.33		75	9.65
123	8.56		100	8.99
161	8.08		150	8.20
202	7.88		200	7.88
236	7.66		250	7.46
315	6.65		300	6.75
392	6.21		400	6.19
466	5.90		500	5.74
613	5.15		600	5.22
780	4.42		700	4.73
			800	(4.38)

60.70

YELLOWFIN; November 26, 1951; 0405, 0520 GCT; 37°17'N, 124°21'W; sounding, 2000 fm; wind, 180°, force 6; weather, drizzle; sea, very rough; wire angle, 20°, 27°.

60.80

0	14.62		0	14.62
9	14.61	33.06	10	14.61
26	14.14		20	14.59
56	12.06		30	12.81
85	9.98		50	12.80
111	8.43		75	10.75
166	8.08		100	8.69
222	7.15		150	8.20
262	6.63		200	7.58
			250	6.77
317	6.27		300	6.37
525	5.15a)		400	5.74
629	4.96		500	5.22
841	4.22		600	5.03
			700	4.72
			800	4.38

YELLOWFIN; November 25, 1951; 2240 GCT; 36°57'N, 125°04'W; sounding, 2400 fm; wind, 180°, force 5; weather, overcast; sea, very rough; wire angle, 32°.

0	15.10		0	15.10
9	15.10	32.93	10	15.10
26	15.10		20	15.10
50	12.27		30	15.05
74	9.85		50	12.27
95	9.04		75	9.80
136	8.18		100	8.88
176	7.88		150	8.05
218	7.23		200	7.55
258	6.69		250	6.78
337	5.88		300	6.22
418	5.22		400	5.31
497	5.02		500	5.01
663	4.72		600	4.83
837	4.12		700	4.63
			800	4.28

60.90

YELLOWFIN; November 25, 1951; 1530, 1605, 1655 GCT; 36°37'N, 125°47'W; sounding, 2400 fm; wind, 160°, force 5; weather, rain showers; sea, rough; wire angle, 33°, 35°, 50°.

63.52

0	15.68		0	15.68
9	15.66	32.80	10	15.66
16	15.67		20	15.66
36	15.30		30	15.50
			50	15.10
52	15.06		75	10.20
67	13.12		100	9.13
96	9.20		150	8.05
123	8.96		200	7.68
151	8.04		250	7.24
			300	6.61
178	7.81		400	5.45
237	7.38		500	(5.00)
293	6.70			
347	5.98			
453	5.12			

YELLOWFIN; November 28, 1951; 0303 GCT; 37°19'N, 122°36'W; sounding, 45 fm; wind, 200°, force 3; weather, clear; sea, slight; wire angle, 02°.

0	13.88		0	13.88
9	13.83	33.25	10	13.83
20	13.74		20	13.74
30	13.66		30	13.66
50	13.39		50	13.39

a) Alternate value, 5.22°C, not used in interpolation.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; November 28, 1951; 0516 GCT; 37°14'N, 122°49.5'W; sounding, 140 fm; wind, 180°, force 3; weather, clear; sea, moderate; wire angle, 00°.

0	13.94		0	13.94
10	13.80	33.28	10	13.80
25	13.54		20	13.61
49	12.78		30	13.48
75	11.58		50	12.65
100	11.04		75	11.58
155	9.27		100	11.04
206	8.60		150	9.39
			200	8.66

YELLOWFIN; November 28, 1951; 2015, 1858 GCT; 36°39'N, 122°26'W; sounding, 1200 fm; wind, 090°, force 4; weather, partly cloudy; sea, very rough; wire angle, 10°, 18°.

0	14.70		0	14.70
10	14.58	33.28	10	14.58
25	14.56		20	14.58
54	12.23		30	14.44
78	11.03		50	13.00
108	10.43		75	11.10
162	9.59		100	10.56
217	9.03		150	9.77
276	8.35		200	9.19
325	7.44		250	8.68
			300	7.86
415	6.61		400	6.74
519	5.60		500	5.73
621	5.09		600	5.18
824	4.28		700	4.74
1027	3.68		800	4.36
1229	3.24		1000	3.73

YELLOWFIN; November 29, 1951; 0509 GCT; 36°10.5'N, 121°45.5'W; sounding, 240 fm; wind, 340°, force 3; weather, clear; sea, moderate; wire angle, 00°.

0	14.62		0	14.62
9	14.34	33.30	10	14.33
25	13.05		20	13.30
50	11.95		30	12.80
75	10.57		50	11.95
100	10.20		75	10.57
155	9.58		100	10.20
205	8.86		150	9.64
254	7.97		200	8.95
305	7.68		250	8.02
			300	7.70

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

63.55

YELLOWFIN; November 28, 1951; 2320 GCT; 36°49'N, 122°04.5'W; sounding, 50 fm; wind, 090°, force 3; weather, partly cloudy; sea, rough; wire angle, 01°.

67.50

0	14.08		0	14.08
10	14.01	33.32	10	14.01
20	13.96		20	13.96
30	13.94		30	13.94
50	13.58		50	13.58

67.55

YELLOWFIN; November 28, 1951; 1355, 1228 GCT; 36°19'N, 123°09'W; sounding, 1700 fm; wind, 180°, force 3; weather, overcast; sea, moderate; wire angle, 04°, 04°.

67.65

0	13.67		0	13.67
10	13.60	32.97	10	13.60
25	13.44		20	13.47
50	10.05		30	13.44
75	9.37		50	10.05
100	8.72		75	9.37
154	8.17		100	8.72
204	7.72		150	8.20
254	7.25		200	7.76
408	5.84		250	7.30
			300	6.85
405a)	5.92		400	5.97
504	5.35		500	5.38
607	4.86		600	4.89
816	4.18		700	4.51
1011	3.70		800	4.21
			1000	3.73

70.51

YELLOWFIN; November 29, 1951; 1142, 1000 GCT; 35°53'N, 122°23'W; sounding, 1600 fm; wind, 340°, force 4; weather, fog; sea, moderate; wire angle, 00°, 00°.

70.60

0	15.03		0	15.03
10	15.03	33.30	10	15.03
25	14.79		20	14.95
40	14.54		30	14.68
75	9.62		50	13.70
100	8.98		75	9.62
156	8.42		100	8.98
206	8.04		150	8.46
256	7.64		200	8.08
306	7.15		250	7.70
412	6.24		300	7.19
			400	6.25
405a)	6.22		500	5.52
503	5.49		600	5.09
608	5.06		700	4.73
809	4.36		800	4.39
1211	3.16		1000	3.73

a) Overlapping casts; reconciliation of temperature curve.

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

70.70

YELLOWFIN; November 29, 1951; 1817, 1645 GCT; 35°33'N, 123°06'W; sounding, 2000+ fm; wind, 320°, force 1; weather, partly cloudy; sea, very rough; wire angle, 05°, 10°.

70.80

0	14.77		0	14.77
10	14.51	33.23	10	14.51
25	14.17		20	14.21
50	10.86		30	14.15
74	9.25		50	10.86
99	9.54		75	9.26
153	8.82		100	9.54
204	8.34		150	8.86
252	7.66		200	8.38
302	7.22		250	7.72
407	6.75		300	7.24
			400	6.69
401a)	6.66		500	5.89
501	5.87		600	5.38
605	5.36		700	4.93
808	4.52		800	4.54
1007	3.79		1000	3.81
1212	3.29			

73.50

YELLOWFIN; November 30, 1951; 1853 GCT; 35°37'N, 121°16.5'W; sounding, 60 fm; wind, 140°, force 3; weather, partly cloudy; sea, very rough; wire angle, 00°.

73.60

0	15.04		0	15.04
10	14.87	33.32	10	14.87
20	13.70		20	13.70
30	12.94		30	12.94
50	12.32		50	12.32

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

YELLOWFIN; November 30-29, 1951; 0105, 2325 GCT; 35°13'N, 123°48'W; sounding, 2000+ fm; wind, 250°, force 3; weather, cloudy; sea, rough; wire angle, 11°, 16°.

0	16.02		0	16.02
9	16.00	33.06	10	16.00
24	15.42		20	15.60
49	11.17		30	15.42
73	9.94		50	11.15
98	9.16		75	9.90
152	9.01		100	9.13
202	7.84		150	9.02
252	7.46		200	7.90
301	6.82		250	7.49
405	5.96		300	6.88
			400	5.92
394a)	5.97		500	5.51
490	5.57		600	5.00
593	5.02		700	4.69
793	4.48		800	4.46
990	3.86		1000	3.83
1194	3.34			

YELLOWFIN; November 30, 1951; 1255, 1053 GCT; 35°18'N, 121°58.5'W; sounding, 1350 fm; wind, 260°, force 2; weather, partly cloudy; sea, slight; wire angle, 05°, 06°.

0	14.34		0	14.34
10	14.34	33.30	10	14.34
25	14.26		20	14.28
50	10.64		30	14.25
75	9.46		50	10.64
100	9.09		75	9.46
155	8.41		100	9.09
205	7.70		150	8.50
255	7.34		200	7.75
305	7.07		250	7.37
410	6.06		300	7.10
			400	6.24
415b)	6.16		500	5.72
514	5.65		600	5.27
610	5.22		700	4.82
825	4.35		800	4.44
1025	3.62		1000	3.72
1231	3.20			

a) Overlapping casts; reconciliation of temperature curve.
b) Double cast; reconciliation of temperature curve.

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

YELLOWFIN; November 30, 1951; 2332 GCT; 35°04.5'N, 120°52'W; sounding, 74 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 00°.

0	14.90		0	14.90
10	14.53	33.30	10	14.53
20	14.34		20	14.34
30	13.50		30	13.50
50	11.96		50	11.96
75	10.80		75	10.80
100	10.22		100	10.22

YELLOWFIN; December 1, 1951; 1004, 0829 GCT; 34°34'N, 121°55'W; sounding, 2100 fm; wind, 220°, force 4; weather, overcast; sea, rough; wire angle, 13°, 08°.

0	15.10		0	15.10
10	15.09	33.13	10	15.09
26	13.05		20	14.45
55	9.43		30	12.20
80	9.13		50	9.69
110	9.17		75	9.13
165	8.42		100	9.16
220	7.96		150	8.62
280	7.43		200	8.12
329	6.88		250	7.68
444	6.10		300	7.20
			400	6.38
441a)	6.11		500	5.68
551	5.35		600	5.10
660	4.88		700	4.73
874	4.16		800	4.41
1088	3.56		1000	3.81
1293	3.04b)			

a) Overlapping casts; reconciliation of temperature curve.
b) Alternate value, 3.33°C, not used in interpolation.

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

77.50

YELLOWFIN; December 1, 1951; 0330, 0221 GCT; 34°54.5'N, 121°13'W; sounding, 360 fm; wind, 180°, force 2; weather, clear; sea, smooth; wire angle, 16°, 15°.

77.55

0	16.24		0	16.24
10	15.60	33.34	10	15.60
24	15.13		20	15.18
48	12.29		30	15.12
72	11.11		50	12.10
95	10.42		75	11.02
148	9.53		100	10.31
198	9.14		150	9.50
246	8.48		200	9.12
296	8.08		250	8.41
			300	7.80
289a)	7.90		400	6.93
343	7.44		500	(5.82)
391	7.01			
441	6.42			
491	5.90			

77.65

YELLOWFIN; December 3, 1951; 0401 GCT; 34°26.5'N, 120°32.5'W; sounding, 75 fm; wind, 340°, force 5; weather, clear; sea, very rough; wire angle, 14°.

80.51

0	14.66		0	14.66
10	14.64	33.28	10	14.64
20	13.98		20	13.98
30	12.67		30	12.67
49	11.84			

S10

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

80.55

YELLOWFIN; December 3, 1951; 0138 GCT; 34°19'N, 120°48'W; sounding, 350 fm; wind, 340°, force 7; weather, partly cloudy; sea, high; wire angle, 35°.

80.60

0	15.58		0	15.58
8	15.58	33.30	10	15.58
20	15.56		20	15.56
40	15.40		30	15.48
61	12.91		50	15.15
82	11.56		75	11.85
127	9.52		100	10.50
170	8.80		150	9.07
256	8.04		200	8.53
353	7.01		250	8.11
448	6.40		300	7.52
			400	6.68

OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

YELLOWFIN; December 2, 1951; 2218, 2044 GCT; 34°09'N, 121°09'W; sounding, 1200 fm; wind, 340°, force 6; weather, partly cloudy; sea, high; wire angle, 14°, 16°.

0	16.54		0	16.54
10	16.52	33.42	10	16.52
25	16.38		20	16.41
49	14.99		30	16.36
73	10.29		50	13.50
97	9.62		75	10.20
151	8.82		100	9.53
199	8.16		150	8.85
249	7.62		200	8.14
298	6.92		250	7.61
401	6.25		300	6.89
			400	6.48
399a)	6.48		500	5.98
497	5.99		600	5.36
600	5.36		700	4.90
803	4.57		800	4.58
1004	4.00		1000	4.01
1210	3.39			

80.70

YELLOWFIN; December 2, 1951; 1420, 1238 GCT; 33°49'N, 121°51'W; sounding, 2000+ fm; wind, 340°, force 5; weather, cloudy; sea, high; wire angle, 11°, 20°.

80.80

0	15.51		0	15.51
10	15.51		10	15.51
25	15.44		20	15.46
55	11.88		30	15.44
80	9.12		50	14.12
165	8.31		75	10.10
220	7.80		100	9.42
280	6.96		150	8.71
330	6.42		200	7.98
446	5.66		250	7.40
			300	6.71
418a)	5.88		400	6.00
522	5.31		500	5.40
624	4.98		600	5.05
828	4.32		700	4.72
1038	3.73		800	4.40
1241	3.26		1000	3.82

YELLOWFIN; December 2, 1951; 0730, 0558 GCT; 33°29'N, 122°32'W; sounding, 2000+ fm; wind, 300°, force 6; weather, clear; sea, very rough; wire angle, 20°, 30°.

0	15.36		0	15.36
8	15.34	33.21	10	15.32
23	14.84		20	15.08
52	10.38		30	14.80
76	9.26		50	10.55
104	8.81		75	9.27
156	8.26		100	8.87
209	8.14		150	8.30
266	7.66		200	8.18
314	7.17		250	7.85
429	6.37		300	7.29
			400	6.61
385a)	6.72		500	6.09
481	6.19		600	5.45
579	5.56		700	5.02
774	4.72		800	4.61
976	3.88		1000	3.79
1178	3.28			

a) Overlapping casts; reconciliation of temperature curve.

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; December 2, 1951; 0128, 0138, 0004 GCT; 33°09'N, 123°13'W; sounding, 2000+ fm; wind, 240°, force 6; weather, cloudy; sea, very rough; wire angle, 15°, 15°, 12°.

0	15.89		0	15.89
			10	15.88
10	15.88	33.39	20	15.86
24	15.84		30	15.79
48	15.56		50	15.55
73	11.13		75	10.97
97	10.07		100	9.92
150	8.90		150	8.90
199	8.36		200	8.35
249	7.65		250	7.64
298	7.39		300	7.37
403	6.44		400	6.50
			500	6.10
403a)	6.47		600	5.49
501	6.09		700	5.02
606	5.46		800	4.69
808	4.66		1000	3.92
1010	3.86			
1216	3.32			

YELLOWFIN; December 3, 1951; 1356 GCT; 34°01'N, 119°02.5'W; sounding, 160 fm; wind, direction missing, force 1; weather, clear; sea, moderate; wire angle, 00°.

0	15.36		0	15.36
10	15.29	33.27	10	15.29
20	14.70		20	14.70
30	14.01		30	14.01
50	12.43		50	12.43
75	11.68		75	11.68
100	10.58		100	10.58

YELLOWFIN; December 3, 1951; 2040 GCT; 33°37'N, 119°52'W; sounding, 135 fm; wind, 270°, force 2; weather, cloudy; sea, moderate; wire angle, 05°.

0	15.80		0	15.80
10	15.75	33.27	10	15.75
24	15.69		20	15.70
50	12.21		30	15.68
75	10.12		50	12.21
100	9.72		75	10.12
155	8.95		100	9.72
205	8.62		150	8.98
			200	8.65

OBSERVED			INTERPOLATED	
Z	T	S	Z	T
m	°C	‰	m	°C

YELLOWFIN; December 3, 1951; 1014 GCT; 34°08'N, 119°34'W; sounding, 140 fm; wind, 340°, force 3; weather, clear; sea, rough; wire angle, 09°. 80.90 83.43

0	15.10		0	15.10
10	15.10	33.28	10	15.10
25	14.04		20	14.90
50	12.07		30	13.63
75	10.50		50	12.07
100	9.98		75	10.50
157	9.35		100	9.98
205	9.01		150	9.40
			200	9.03

YELLOWFIN; December 3, 1951; 1540 GCT; 33°57'N, 119°10.5'W; sounding, 400 fm; wind, 320°, force 1; weather, cloudy; sea, moderate; wire angle, 00°. 85.38 85.40

0	14.83		0	14.83
10	14.82	33.26	10	14.82
25	14.66		20	14.73
50	13.18		30	14.58
75	11.32		50	13.18
104	10.98		75	11.32
154	9.57		100	11.01
206	9.02		150	9.63
305	8.30		200	9.08
410	7.18		250	8.76
511	6.46		300	8.33
			400	7.26
			500	6.53

YELLOWFIN; December 5, 1951; 0448, 0315 GCT; 33°11'N, 118°23.5'W; sounding, 600 fm; wind, 270°, force 1; weather, drizzle; sea, slight; wire angle, 00°, 00°. 85.50 90.37

0	16.30	33.32	0	16.30
10	16.01	33.33	10	16.01
25	15.40	33.28	20	15.45
50	11.97	33.14	30	15.40
75	10.76	33.39	50	11.97
100	9.68	33.60	75	10.76
155	8.98	33.95	100	9.68
205	8.43	34.07	150	9.02
255	8.32	-	200	8.48
305	7.76	-	250	8.34
410	6.96	-	300	7.80
			400	7.10
410a)	7.02	34.29	500	6.34
509	6.28	34.32	600	5.70
613	5.62	34.36	700	5.13
714	5.06	34.38	800	4.63
818	4.56	34.42	1000	4.19
1019	4.18	34.43		

a) Overlapping casts; reconciliation of temperature curve.

S10

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OBSERVED			INTERPOLATED	
Z m	T °C	S ‰	Z m	T °C

90.45

YELLOWFIN; December 4, 1951; 1754 GCT;[a] 32°54'N, 118°56'W; sounding, 900 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 16°.

90.45

1240	3.82			
1243	3.80			
1246	3.80			
1249	3.81			
1252	3.80			
1255	3.80			
1258	3.80			
1261	3.80			
1264	3.80			
1267	3.78			
1270	3.78			

YELLOWFIN; December 4, 1951; 2046, 1935 GCT; 32°54'N, 118°56'W; sounding, 900 fm; wind, 270°, force 1; weather, partly cloudy; sea, moderate; wire angle, 15°, 16°.

0	15.40	33.36	0	15.40
9	15.28	33.32	10	15.28
24	14.99	33.33	20	15.13
48	10.46	33.42	30	13.30
72	9.72	33.53	50	10.31
96	9.06	33.70	75	9.68
148	8.60	34.00	100	8.98
196	8.20	34.06	150	8.57
244	7.85	34.12	200	8.18
292	7.48	34.23	250	7.80
395	6.86	34.29	300	7.41
			400	6.72
389b)	6.78	34.29	500	6.30
483	6.44	34.29	600	5.48
584	5.57	34.35	700	5.05
782	4.77	34.45	800	4.69
978	4.09	34.47	1000	4.04
1182	3.84	34.52		

90.53

YELLOWFIN; December 4, 1951; 1349 GCT; 32°40'N, 119°33.5'W; sounding, 90 fm; wind, 270°, force 1; weather, cloudy; sea, moderate; wire angle, 02°.

90.60

0	15.86		0	15.86
10	15.84	33.33	10	15.84
20	15.86		20	15.86
30	15.68		30	15.68
51	12.90		50	12.95
75	11.31c)		75	11.31
100	9.92		100	9.92
125	9.72			

YELLOWFIN; December 4, 1951; 0920 GCT; 32°25'N, 119°57.5'W; sounding, 450 fm; wind, 300°, force 4; weather, overcast; sea, very rough; wire angle, 12°.

0	16.67		0	16.67
10	16.66	33.31	10	16.66
23	16.64		20	16.66
50	15.14		30	16.64
75	10.96		50	15.14
100	9.98		75	10.96
155	9.08		100	9.98
205	8.56		150	9.13
305	7.44		200	8.62
411	6.59		250	8.05
512	5.72		300	7.49
			400	6.68
			500	5.85

a) Test cast.
b) Overlapping casts; reconciliation of temperature curve.
c) Alternate value, 11.91°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; December 7, 1951; 0024 GCT; 32°55.5'N, 117°19'W; sounding, 50 fm; wind, 300°, force 4; weather, drizzle; sea, rough; wire angle, 00°. 93.27

0	16.18		5.46		0	16.18	5.46
10	16.18	33.41	5.51		10	16.18	5.51
20	15.88		5.37		20	15.88	5.36
30	15.30		5.40		30	15.30	5.40
50	12.20		4.84		50	12.20	4.84
76	11.70		3.07		75	11.72	3.08

HORIZON; December 7, 1951; 0255 GCT; 32°50'N, 117°32'W; sounding, 480 fm; wind, 280°, force 4; weather, drizzle; sea, rough; wire angle, 12°. 93.30

0	16.16		5.49		0	16.16	5.49
10	16.16	33.43	5.53		10	16.16	5.53
25	16.16		5.45		20	16.16	5.50
49	13.58		4.48		30	16.13	5.25
73	12.46		3.41		50	13.52	4.30
96	11.77		3.10		75	12.40	3.36
147	10.24		2.42		100	11.60	3.02
193	9.49		2.17		150	10.19	2.40
238	8.82		1.92		200	9.40	2.14
284	8.01		1.64		250	8.58	1.85
380	7.20		0.95		300	7.87	1.49
474	6.62		0.67		400	7.09	0.91
573	5.91		0.36		500	6.42	0.56
671	5.46		0.25		600	5.80	0.32
774	4.80		0.46		700	5.27	0.27

HORIZON; December 7, 1951; 0815 GCT; 32°31'N, 118°14'W; sounding, 700 fm; wind, 330°, force 3; weather, drizzle; sea, moderate; wire angle, missing. 93.40

0	15.21		5.59		0	15.21	5.59
15	15.23	33.27	5.57		10	15.23	5.58
40	14.78		5.62		20	15.18	5.60
65	11.74		5.27		30	15.02	5.63
89	10.24		4.81		50	13.50	5.51
142	9.14		3.51		75	10.88	5.08
188	8.41		2.70		100	10.00	4.50
235	8.02		2.19		150	9.00	3.35
253	7.95		2.11		200	8.28	2.51
281	7.80		1.65		250	7.97	2.13
471	6.20		0.44		300	7.62	1.34
571	5.54		0.37		400	6.75	0.69
766	4.65		0.32		500	6.00	0.40
959	4.07		0.50		600	5.38	0.35
1161	3.54		0.74		700	4.90	0.32
					800	4.55	0.33
					1000	3.95	0.53

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
93.50	HORIZON; December 7, 1951; 1416 GCT; 32°12'N, 118°56'W; sounding, 820 fm; wind, 350°, force 6; weather, partly cloudy; sea, high; wire angle, 22°.							
0	16.18		5.46		0	16.18	5.46	
9	16.20	33.28	5.29		10	16.19	5.30	
23	16.18		5.43		20	16.18	5.43	
51	16.06a)		5.50		30	16.16	5.45	
74	12.72		5.58		50	16.08	5.50	
102	10.05b)		5.19		75	12.71	5.58	
152	9.42		3.35		100	10.10	5.40	
202	8.62		3.14		150	9.45	3.38	
257	7.85		2.24		200	8.67	3.16	
305	7.54		1.56		250	7.92	2.36	
410	6.54		1.01		300	7.59	1.61	
511	5.79		0.50		400	6.61	1.08	
614	5.43		0.35		500	5.85	0.53	
813	4.55		0.41		600	5.48	0.36	
1019	3.92		0.60		700	5.00	0.38	
1219	3.44		0.78		800	4.60	0.40	
					1000	3.97	0.57	
					1200		0.74	
97.30	HORIZON; December 8, 1951; 0820 GCT; 32°15'N, 117°08.5'W; sounding, 35 fm; wind, 210°, force 3; weather, clear; sea, rough; wire angle, 00°.							
0	15.44		5.29		0	15.44	5.29	
10	15.48	33.42	5.23		10	15.48	5.23	
20	15.46		5.25		20	15.46	5.25	
30	15.46		5.11		30	15.46	5.11	
97.32	HORIZON; December 8, 1951; 0620 GCT; 32°13'N, 117°21'W; sounding, 730 fm; wind, 090°, force 5; weather, clear; sea, rough; wire angle, 10°.							
0	15.78		5.49		0	15.78	5.49	
10	15.81	33.33	5.51		10	15.81	5.51	
25	15.78		5.52		20	15.79	5.52	
50	11.64		5.35		30	15.76	5.50	
74	10.58		4.79		50	11.64	5.35	
97	9.80		4.09		75	10.58	4.78	
147	9.33		3.24		100	9.75	3.99	
194	9.20		2.26		150	9.32	3.18	
241	8.92		1.41		200	9.18	2.13	
287	8.22		1.38		250	8.80	1.39	
384	7.16		0.90		300	8.07	1.33	
478	6.36		0.55		400	7.00	0.82	
576	5.70		0.34		500	6.20	0.49	
770	4.69		0.34		600	5.55	0.33	
963	4.10		0.55		700	5.00	0.33	
1166	3.50		0.77		800	4.61	0.38	
					1000	4.00	0.59	

a) Alternate value, 13.73°C, not used in interpolation.
b) Alternate value, 11.82°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; December 8, 1951; 0108, 0145 GCT; 31°53.5'N, 117°49.5'W; sounding, 680 fm; wind, 320°, force 4; weather, partly cloudy; sea, high; wire angle, 28°, 38°. 97.40

0	15.36		5.55	0	15.36	5.55
8	15.36	33.31	5.48	10	15.36	5.48
22	15.36		5.54	20	15.36	5.53
45	15.38		5.47	30	15.36	5.55
66	14.37		5.52	50	15.39	5.47
88	11.47a)		5.14	75	12.70	5.47
132	9.78		3.76	100	11.00	4.73
169	8.80		2.91	150	9.20	3.25
207	8.42		2.41	200	8.49	2.50
				250	8.03	1.88
219	8.21		2.22	300	7.71	1.47
301	7.70		1.47	400	6.63	0.80
379	6.75		0.95	500	(6.09)	(0.36)
466	6.28		0.41			

HORIZON; December 7, 1951; 1949 GCT; 31°35'N, 118°31'W; sounding, 1300 fm; wind, 330°, force 5; weather, partly cloudy; sea, very high; wire angle, 40°. 97.50

0	16.60		5.39	0	16.60	5.39
8	16.61	33.33	5.36	10	16.60	5.34
19	16.59		4.99	20	16.60	4.98
44	16.61		5.10	30	16.60	4.98
61	16.62		5.35	50	16.62	5.19
84	13.80		5.69	75	15.50	5.65
123	10.88		5.00	100	12.05	5.60
158	9.92		4.03	150	10.10	4.25
197	9.09		3.06	200	9.05	3.01
230	8.74		2.75	250	8.40	2.49
305	7.69		1.75	300	7.75	1.81
381	7.00		0.93	400	6.82	0.79
458	6.35		0.57	500	6.11	0.46
629	5.40		0.24	600	5.55	0.26
822	4.56		0.48	700	5.08	0.33
1024	3.92		0.62	800	4.66	0.45
				1000	3.99	0.61

HORIZON; December 8, 1951; 1302 GCT; 31°42.5'N, 116°46'W; sounding, 110 fm; wind, 060°, force 4; weather, clear; sea, rough; wire angle, 08°. 100.29

0	14.37		4.83	0	14.37	4.83
10	14.37	33.57	4.82	10	14.37	4.82
25	13.66		4.21	20	14.32	4.44
49	11.86		3.43	30	12.95	3.97
73	11.42		2.95	50	11.83	3.41
97	10.86		2.58	75	11.38	2.91
120	10.70		2.19	100	9.90	2.50
148	9.99		1.97	150	(9.92)	(1.96)

HORIZON; December 8, 1951; 1428 GCT; 31°40.5'N, 116°47'W; sounding, 200 fm; wind, 060°, force 4; weather, clear; sea, rough; wire angle, 07°. 100.30

0	14.96		5.03	0	14.96	5.03
10	14.97	33.50	5.16	10	14.97	5.16
25	13.36		4.38	20	13.90	4.95
50	12.67		3.70	30	13.21	4.20
74	11.79		3.54	50	12.67	3.70
98	10.92		2.61	75	11.70	3.52
150	10.06		1.90	100	10.88	2.51
196	9.50		1.78	150	10.06	1.90
243	8.91		1.61	200	9.44	1.77
292	8.34		1.12	250	8.81	1.55
				300	(8.24)	(1.01)

a) Alternate value, 12.10°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
100.40	HORIZON; December 8, 1951; 1903 GCT; 31°21.5'N, 117°28'W; sounding, 1100 fm; wind, 310°, force 3; weather, clear; sea, very rough; wire angle, 12°.							
0	16.48		5.29		0	16.48	5.29	
10	16.50	33.51	5.26		10	16.50	5.26	
25	16.46		5.16		20	16.48	5.18	
49	14.40		5.19		30	16.44	5.15	
73	11.98		4.18u		50	14.35	5.19	
96	10.04		4.27		75	11.70	5.02	
147	9.18		3.12		100	9.92	4.12	
192	9.02		2.39		150	9.17	3.05	
237	8.80		1.77		200	8.99	2.28	
282	8.54		1.32		250	8.73	1.62	
379	7.35		0.79		300	8.32	1.20	
470	6.48		0.43		400	7.11	0.67	
568	5.87		0.36		500	6.79	0.40	
760	4.87		0.37		600	5.67	0.36	
952	4.22		0.49		700	5.13	0.37	
1155	3.60		0.75		800	4.73	0.39	
					1000	4.07	0.54	
100.50	HORIZON; December 8, 1951; 2356 GCT; 31°01'N, 118°07'W; sounding, 980 fm; wind, 040°, force 3; weather, partly cloudy; sea, rough; wire angle, 08°.							
0	16.36		5.43		0	16.36	5.43	
10	16.36	33.35	5.48		10	16.36	5.48	
25	16.31		5.42		20	16.32	5.45	
50	16.30		5.35		30	16.30	5.41	
74	13.18a)		4.99		50	16.30	5.35	
98	10.91		4.44		75	13.00	4.98	
150	9.60		3.57		100	10.87	4.39	
196	8.86b)		2.97		150	9.60	3.57	
242	8.29		2.47		200	8.80	2.92	
289	7.80		1.71		250	8.22	2.38	
386	6.88		1.04		300	7.68	1.60	
478	6.50		0.49		400	6.83	0.92	
576	5.80		0.34		500	6.33	0.43	
771	4.77		0.34		600	5.65	0.32	
963	4.06		0.55		700	5.10	0.32	
1165	3.53		0.76		800	4.65	0.37	
					1000	3.95	0.58	
100.60	HORIZON; December 9, 1951; 0502 GCT; 30°41'N, 118°48'W; sounding, 1725 fm; wind, 250°, force 2; weather, clear; sea, rough; wire angle, 21°.							
0	16.63		5.36		0	16.63	5.36	
9	16.63	33.33	5.36		10	16.63	5.36	
23	16.62		5.36		20	16.62	5.35	
47	16.59		5.31		30	16.61	5.34	
70	16.58		5.36		50	16.58	5.31	
92	13.74		5.53		75	16.58	5.44	
141	10.45		4.15		100	13.00	5.51	
183	9.02		3.60		150	10.09	4.02	
227	8.39		3.08		200	8.80	3.38	
269	7.75		2.56		250	8.00	2.80	
360	6.88		1.68		300	7.45	2.26	
447	6.12		0.77		400	6.52	1.22	
539	5.52		0.49		500	5.77	0.58	
724	4.79		0.27		600	5.28	0.37	
911	4.19		0.61		700	4.90	0.28	
1111	3.63		0.70		800	4.56	0.41	
					1000	3.93	0.65	

a) Alternate value, 12.96°C, not used in interpolation.
b) Alternate value, 9.10°C, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; December 9, 1951; 1005 GCT; 30°17.5'N, 119°32.5'W; sounding, 2050 fm; wind, 050°, force 3; weather, partly cloudy; sea, rough; wire angle, 12°. 100.70

0	17.42		5.25		0	17.42	5.25	
10	17.44	33.50	5.24		10	17.44	5.24	
25	17.43		5.16		20	17.44	5.18	
49	17.44		5.22		30	17.44	5.15	
73	17.44		5.29		50	17.44	5.23	
97	14.52		5.43		75	17.40	5.32	
147	10.12		4.96		100	13.35	5.43	
192	8.92		3.45		150	10.01	4.65	
237	8.21		3.11		200	8.77	3.40	
284	7.88		2.16		250	8.11	2.99	
379	7.23		0.91		300	7.79	1.50	
471	6.30		0.65		400	7.01	0.83	
568	5.58		0.44		500	6.08	0.58	
760	4.83		0.37		600	5.44	0.41	
952	4.27		0.50		700	5.04	0.38	
1153	3.68		0.70		800	4.72	0.39	
					1000	4.12	0.53	

HORIZON; November 28, 1951; 1332 GCT; 31°03'N, 116°23.5'W; sounding, 35 fm; wind, 080°, force 2; weather, clear; sea, rough; wire angle, 00°. 103.30

0	17.20		5.34	0.56	0	17.20	5.34	0.56
10	17.21	33.57	5.04	0.52	10	17.21	5.04	0.52
20	17.20		5.18	-	20	17.20	5.18	
30	17.17		5.04	-	30	17.17	5.04	
50	16.14		3.88	-	50	16.14	3.88	

HORIZON; November 28, 1951; 1700 GCT; 30°55.5'N, 116°45'W; sounding, 960 fm; wind, 340°, force 3; weather, cloudy; sea, rough; wire angle, 10°. 103.35

0	17.22		5.58	0.60	0	17.22	5.58	0.60
10	17.24	33.51	5.26	0.60	10	17.24	5.26	0.60
25	17.18		5.25	0.63	20	17.20	5.25	0.62
49	14.36		3.81	-	30	17.15	5.22	0.83
73	13.52		3.35	1.55	50	14.35	3.80	1.31
98	12.47		2.89	1.75	75	13.45	3.33	1.58
149	10.66		2.71	-	100	12.37	2.88	(1.76)
195	9.82		2.35	-	150	10.64	2.70	
241	9.24		1.60	2.35	200	9.75	2.28	
286	8.79		1.39	-	250	9.15	1.54	
383	7.50		0.77	-	300	8.63	1.30	
475	6.69		0.70	2.79	400	7.32	0.74	
572	5.86		0.33	2.94	500	6.46	0.63	2.82
765	4.78		0.47	3.07	600	5.70	0.32	2.97
956	4.04		0.56	3.11	700	5.10	0.41	3.04
1159	3.57		0.82	3.03	800	4.63	0.48	3.09
					1000	3.93	0.60	3.10

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
103.40	HORIZON; November 28, 1951; 2053 GCT; 30°46.5'N, 117°05'W; sounding, 950 fm; wind, 320°, force 4; weather, cloudy; sea, very rough; wire angle, 15°.							
0	17.53		5.36	0.54	0	17.53	5.36	0.54
10	17.54	33.39	5.30	0.65	10	17.54	5.30	0.65
24	17.51		5.54	0.63	20	17.52	5.47	0.64
48	14.70		5.76	0.63	30	17.48	5.62	0.63
72	12.53		5.43	0.94	50	14.50	5.75	0.63
95	11.16		4.75	1.39	75	12.25	5.30	1.04
144	10.04		3.16	-	100	11.03	4.67	1.44
189	9.26		2.41	2.04	150	9.94	2.90	1.87
235	8.76		2.08	2.00	200	9.07	2.35	2.11
281	8.76		1.03	-	250	8.76	1.75	
376	7.60		0.84	-	300	8.59	0.93	
467	6.74		0.50	-	400	7.39	0.80	
563	5.86		0.28	-	500	6.42	0.40	
755	4.84		0.33	3.17	600	5.63	0.29	
946	4.18		0.48	3.19	700	5.08	0.30	
1146	3.61		0.75	3.29	800	4.67	0.36	3.18
					1000	4.01	0.53	3.21
107.32	HORIZON; November 29, 1951; 0950 GCT; 30°25'N, 116°12.5'W; sounding, 395 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 12°.							
0	17.86		5.35	0.46	0	17.86	5.35	0.46
10	17.88	33.49	5.33	-	10	17.88	5.33	0.48
25	17.85		5.32	0.48	20	17.88	5.31	0.48
48	13.90		5.37	0.55	30	17.30	5.33	0.49
72	12.40		5.28	0.86	50	13.83	5.37	0.56
96	11.17		4.25	-	75	12.20	5.24	0.92
146	10.12		2.64	1.99	100	11.03	3.99	1.38
191	9.65		1.96	2.25	150	10.07	2.55	2.02
236	9.31		1.39	2.42	200	9.59	1.85	2.28
283	8.74		0.47	2.59	250	9.17	1.10	2.50
334	7.97		0.83a)	2.66	300	8.50	0.54	2.62
380	7.28		0.63	2.91	400	7.12	0.55	2.91
428	6.90		0.50	-	500	6.35	0.43	2.87
475	6.54		0.47	2.86				
578	5.88		0.32	2.99				
107.35	HORIZON; November 29, 1951; 0723 GCT; 30°20'N, 116°21'W; sounding, 980 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 17°.							
0	18.15		5.26	0.49	0	18.15	5.26	0.49
10	18.16	33.46	5.29	0.48	10	18.16	5.29	0.48
24	18.14		5.25	0.62	20	18.15	5.25	0.60
47	15.93		5.41	0.62	30	18.13	5.28	0.63
69	14.11		4.47	-	50	15.71	5.40	(0.62)
91	11.90		3.03u	-	75	13.00		(0.94)
139	10.48		3.01u	1.83	100	11.55		(1.29)
183	10.42		1.36u	2.40	150	10.45		2.12
228	9.11		1.34	2.53	200	10.04		2.45
272	8.92		0.93	-	250	9.00	1.12	2.60
364	7.68		0.65	2.86	300	8.56	0.80	2.76
453	6.64		0.51	2.94	400	7.23	0.61	2.88
546	6.12		0.34	3.08	500	6.39	0.42	3.01
732	5.02		0.31	3.21	600	5.78	0.32	3.14
918	4.20		0.52	3.12	700	5.19	0.30	3.20
1118	3.62		0.72	3.13	800	4.70	0.35	3.18
					1000	3.92	0.59	3.12

a) Alternate value, 1.44 ml/L, not used in interpolation.

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; November 29, 1951; 0316 GCT; 30°09'N, 116°44'W; sounding, 1600 fm; wind, 330°, force 4; weather, cloudy; sea, very rough; wire angle, 18°. 107.40

0	17.61		5.29	0.55	0	17.61	5.29	0.55
10	17.62	33.35	5.34	0.56	10	17.62	5.34	0.56
24	17.60		5.33	0.58	20	17.61	5.34	0.58
48	15.30		5.68	0.59	30	17.60	5.36	0.59
70	13.88		5.65	0.62	50	15.20	5.68	0.60
93	12.08		4.88	0.93	75	13.30	5.62	0.64
140	10.69		3.02	1.90	100	11.90	4.47	1.20
181	9.08		2.91	-	150	10.15	2.98	1.96
222	8.58		2.30	2.17	200	8.80	2.75	2.11
264	8.35		1.59	2.34	250	8.43	1.82	2.27
350	7.80		0.68	2.70	300	8.14	1.12	2.52
435	6.96		0.46	-	400	7.30	0.51	
526	6.26		0.32	-	500	6.47	0.34	
707	5.01		0.32	3.13	600	5.70	0.32	
892	4.28		0.47	-	700	5.05	0.32	
1093	3.71		0.68	-	800	4.65	0.38	
					1000	3.91	0.56	

HORIZON; December 4, 1951; 1535 GCT; 29°50'N, 115°53'W; sounding, 75 fm; wind, 330°, force 4; weather, cloudy; sea, very rough; wire angle, 14°. 110.33

0	16.79		5.39	0.64	0	16.79	5.39	0.64
10	16.79	33.50	5.39	0.64	10	16.79	5.39	0.64
20	16.34		5.49	0.62	20	16.34	5.49	0.62
29	14.70		5.64	0.60	30	14.63	5.64	0.61
48	13.53		4.66	1.06	50	13.50	4.42	1.16
73	13.04		3.34	1.57	75	13.01	3.28	1.59
94	12.67		3.15	1.68	100	12.20	3.12	1.70
117	10.82		3.06	1.73				

HORIZON; December 4, 1951; 1720 GCT; 29°47'N, 116°00'W; sounding, 700 fm; wind, 320°, force 4; weather, partly cloudy; sea, rough; wire angle, 32°. 110.35

0	17.64		5.34	0.55	0	17.64	5.34	0.55
8	17.58	33.50	5.32	0.50	10	17.53	5.33	0.50
22	17.38		5.42	0.57	20	17.40	5.42	0.56
43	17.32		5.31	0.59	30	17.35	5.40	0.58
64	13.80a)		5.49	0.60	50	15.80	5.33	0.60
84	12.81		4.27	1.20	75	13.20	5.00	1.00
128	11.54		1.92	2.08	100	12.32	2.63	1.68
166	10.82		1.77	-	150	11.08	1.90	2.22
207	10.32		1.19	2.52	200	10.40	1.22	2.52
246	9.60		1.24	2.52	250	9.55	1.25	2.52
330	8.74		0.86	2.65	300	9.07	1.03	2.61
412	7.64		0.51	2.72	400	7.78	0.56	2.70
499	6.90		0.27	-	500	6.88	0.27	2.89
675	5.30		0.39	3.11	600	5.82	0.35	3.06
856	4.49		0.39	3.12	700	5.19	0.40	3.11
1054	3.81		0.65	3.20	800	4.72	0.40	3.12
					1000	3.97	0.53	3.17

a) Alternate value, 13.26°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
110.40	HORIZON; December 4, 1951; 2119 GCT; 29°37.5'N, 116°21'W; sounding, 1350 fm; wind, 310°, force 4; weather, cloudy; sea, rough; wire angle, 19°.							
0	17.80		5.39	0.49	0	17.80	5.39	0.49
10	17.83	33.47	5.40	0.44	10	17.83	5.40	0.44
24	17.74		5.35	0.38	20	17.78	5.38	0.39
52	15.65		5.77	0.48	30	17.70	5.40	0.38
75	13.82		5.69	0.52	50	16.10	5.76	0.46
104	11.84		4.88	0.99	75	13.82	5.69	0.52
152	10.04		3.04	-	100	12.12	5.25	0.92
202	10.42		1.12	-	150	10.07	3.10	(1.78)
255	9.53		1.27	2.52	200	10.41	1.14	(2.30)
300	8.84		1.09	-	250	9.66	1.27	(2.49)
404	7.73		0.59	2.86	300	8.84	1.09	2.68
504	6.64		0.38	2.94	400	7.80	0.60	2.85
605	5.90		0.28	3.05	500	6.70	0.39	2.94
805	4.75		0.37	3.14	600	5.94	0.29	3.04
1006	3.94		0.60	3.15	700	5.32	0.31	3.10
1213	3.43		0.82	-	800	4.78	0.37	3.14
					1000	3.95	0.60	3.15
110.50	HORIZON; December 5, 1951; 0314 GCT; 29°17'N, 117°01.5'W; sounding, 1670 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 33°.							
0	17.61		5.43	0.39	0	17.61	5.43	0.39
8	17.64	33.48	5.35	0.50	10	17.64	5.34	0.37
21	17.62		5.33	0.36	20	17.62	5.33	0.36
47	17.62		5.39	0.36	30	17.62	5.33	0.36
67	15.99		5.72	0.34	50	17.62	5.44	0.35
92	14.08		5.65	0.42	75	15.45	5.72	0.35
132	11.20		4.63	0.97	100	13.05	5.55	0.49
175	10.05		2.90	1.54	150	10.71	3.68	1.25
221	9.23		2.27	2.08	200	9.56	2.52	1.84
261	8.93		1.68	2.34	250	9.00	1.87	2.29
351	8.35		0.68	2.67	300	8.70	1.11	2.46
440	7.35		0.41	2.96	400	7.78	0.48	2.87
531	6.55		0.21	3.03	500	6.83	0.27	3.00
714	5.21		0.36	3.16	600	5.98	0.26	3.09
911	4.41		0.46	3.27	700	5.30	0.36	3.15
1109	3.85		0.65	3.04	800	4.83	0.42	3.21
					1000	4.12	0.50	3.20
110.60	HORIZON; December 5, 1951; 0838 GCT; 28°58'N, 117°37'W; sounding, 1900 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; wire angle, 27°.							
0	18.56		5.11	0.38	0	18.56	5.11	0.38
9	18.58	33.68	5.31	0.34	10	18.58	5.31	0.34
22	18.55		5.24	0.36	20	18.55	5.26	0.35
44	18.55		5.16	0.45	30	18.55	5.19	0.40
65	18.45		5.18	0.34	50	18.53	5.15	0.43
86	15.96		5.56	0.44	75	17.50	5.40	0.35
128	11.46		-	1.55	100	14.02	5.48	1.04
164	9.97		3.77	-	150	10.50	4.05	1.67
205	9.13		3.10	1.90	200	9.20	3.23	1.88
236	8.89		2.24	2.06	250	8.63	2.07	2.12
314	7.75		1.55	2.40	300	7.90	1.64	2.34
389	7.29		0.84	2.66	400	7.20	0.77	2.68
471	6.66		0.55	2.75	500	6.41	0.48	
637	5.52		0.33	2.68u	600	5.71	0.33	
812	4.78		0.40	3.12	700	5.25	0.36	
1006	4.11		0.55	3.10	800	4.83	0.40	(3.12)
					1000	4.13	0.54	3.10

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; December 4, 1951; 0343 GCT; 29°10.5'N, 114°58.5'W; sounding, 50 fm; wind, 320°, force 6; weather, clear; sea, high; wire angle, 03°. 115.27

0	18.50		5.15	0.55	0	18.50	5.15	0.55
10	18.52	33.88	5.21	0.56	10	18.52	5.21	0.56
20	18.48		5.18	-	20	18.48	5.18	0.58
30	18.48		5.16	-	30	18.48	5.16	0.62
50	17.59		4.77	0.70	50	17.59	4.77	0.70
75	13.94		2.95	1.64	75	13.94	2.95	1.64

HORIZON; December 4, 1951; 0541 GCT; 29°07.5'N, 115°09'W; sounding, 55 fm; wind, 320°, force 6; weather, clear; sea, high; wire angle, 12°. 115.30

0	18.04		5.24		0	18.04	5.24
10	18.06	33.71	5.24		10	18.06	5.24
20	18.04		5.22		20	18.04	5.22
30	18.06		5.28		30	18.06	5.28
49	18.04		5.17		50	18.04	5.14
73	15.02		4.61		75	14.85	4.50
95	13.22		2.90		100	(12.90)	(2.65)

HORIZON; December 3, 1951; 2159 GCT; 28°55'N, 115°27.5'W; sounding, 568 fm; wind, 290°, force 5; weather, partly cloudy; sea, very rough; wire angle, 38°. 115.35

0	18.04		5.46	0.58	0	18.04	5.46	0.58
8	18.03	33.67	5.22	-	10	18.03	5.20	0.52
20	18.02		5.17	0.54	20	18.02	5.17	0.54
40	18.04		5.24	0.53	30	18.03	5.20	0.54
60	18.00		5.15	0.58	50	18.02	5.22	0.54
80	16.20		3.90	1.20	75	17.20	4.70	1.12
119	12.56		2.76	-	100	13.40	2.94	1.52
172	10.86		2.34	2.00	150	11.68	2.62	1.84
186	10.15		1.86	2.16	200	9.89	1.74	2.24
219	9.62		1.60	2.27	250	9.42	1.39	2.34
288	9.15		0.89	2.44	300	9.00	0.82	2.47
356	8.36		0.65	2.56	400	7.97	0.51	
428	7.67		0.43	-	500	(6.62)	(0.33)	
497	6.66		0.34	-				

HORIZON; December 3, 1951; 1826 GCT; 28°45'N, 115°43'W; sounding, 680 fm; wind, 310°, force 5; weather, partly cloudy; sea, high; wire angle, 15°. 115.40

0	18.01		5.24	0.45	0	18.01	5.24	0.45
10	18.03	33.49	5.33	0.46	10	18.03	5.33	0.46
24	17.99		5.32	0.47	20	18.00	5.32	0.47
48	17.96a)		5.43	0.44	30	17.99	5.33	0.46
72	13.70		5.24	0.77	50	17.93	5.42	0.44
95	12.16		4.93	1.00	75	13.50	5.18	0.80
146	10.20		3.38	1.69	100	11.80	4.84	1.12
192	10.00		2.32	2.00	150	10.18	3.28	1.73
237	9.78		1.50	1.84u	200	9.98	2.10	2.07
284	8.99		1.20	2.46	250	9.53	1.40	
381	8.08		0.76	-	300	8.83	1.11	2.50
474	7.24		0.46	2.77	400	7.92	0.69	2.66
572	6.34		0.32	2.94	500	7.01	0.41	2.80
766	4.90		0.35	3.11	600	6.12	0.32	2.98
957	4.18		0.55	-	700	5.33	0.33	3.09
					800	4.72	0.37	
					1000	(4.02)	(0.62)	

a) Alternate value, 17.75°C, not used in interpolation.

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5112

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
120.25	HORIZON; December 3, 1951; 0931 GCT; 28°19'N, 114°16'W; sounding, 39 fm; wind, 300°, force 5; weather, partly cloudy; sea, very rough; wire angle, 12°.							
0	19.51		4.94	0.61	0	19.51	4.94	0.61
10	19.54	33.98	4.94	0.58	10	19.54	4.94	0.58
20	19.53		4.81	0.58	20	19.53	4.81	0.58
30	19.52		4.93	-	30	19.52	4.93	
49	-		4.89	-				
120.30	HORIZON; December 3, 1951; 0645 GCT; 28°13.5'N, 114°34.5'W; sounding, 45 fm; wind, 310°, force 6; weather, partly cloudy; sea, very rough; wire angle, 10°.							
0	19.68		5.01		0	19.68	5.01	
10	19.71	33.98	4.93		10	19.71	4.93	
20	19.68		4.98		20	19.68	4.98	
30	19.69		5.03		30	19.69	5.03	
49	19.44		5.00		50	19.43	4.99	
73	18.03		4.53		75	(17.90)	(4.45)	
120.35	HORIZON; December 3, 1951; 0353 GCT; 28°03'N, 114°54'W; sounding, 47 fm; wind, 320°, force 5; weather, partly cloudy; sea, rough; wire angle, 15°.							
0	19.47		5.02	0.60	0	19.47	5.02	0.60
10	19.51	33.99	5.09	0.58	10	19.51	5.09	0.58
20	19.46		5.09	0.60	20	19.46	5.09	0.60
29	19.47		5.11	0.60	30	19.47	5.11	0.60
48	19.28		5.17	0.59	50	19.15	5.15	0.60
73	17.30		3.93	1.22	75	(17.10)	(3.70)	(1.30)
120.45	HORIZON; December 2, 1951; 1230 GCT; 27°41.5'N, 115°32'W; sounding, 1180 fm; wind, 340°, force 4; weather, partly cloudy; sea, rough; wire angle, 26°.							
0	19.98		4.87	0.64	0	19.98	4.87	0.64
9	19.98	34.13	4.85	-	10	19.98	4.85	0.61
23	19.96		4.89	0.62	20	19.97	4.87	0.62
49	19.52		4.99	0.62	30	19.93	4.94	0.63
72	15.76		4.07	-	50	19.51	4.98	0.64
98	13.36		2.94	1.66	75	15.30	3.95	1.19
143	11.35		1.52	2.32	100	13.23	2.85	1.72
191	10.57		1.06	2.50	150	11.20	1.47	2.38
242	10.17		0.79	-	200	10.50	0.98	2.50
284	9.64		0.79	2.56	250	10.08	0.80	2.53
383	8.33		0.52	-	300	9.42	0.76	2.60
478	7.34		0.35	2.90	400	8.15	0.48	2.83
573	6.44		0.27	-	500	7.13	0.32	(2.94)
762	5.00		0.33	3.24	600	6.20	0.27	
957	4.21		0.47	-	700	5.39	0.30	
1153	3.58		0.75	3.19	800	4.83	0.35	
					1000	4.06	0.50	

OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L

HORIZON; December 1, 1951; 2001 GCT; 27°30.5'N, 115°45.5'W; sounding, 2100 fm; wind, 320°, force 4; weather, cloudy; sea, rough; wire angle, 24°. 120.50

0	20.94		4.84	0.61	0	20.94	4.84	0.61
9	20.93	34.29	4.93	0.64	10	20.93	4.93	0.64
23	20.82		4.85	0.62	20	20.86	4.86	0.62
50	20.70		4.90	0.62	30	20.79	4.86	0.62
73	15.29		5.49	0.66	50	20.70	4.90	0.62
99	13.32		2.16	-	75	15.00	4.30	0.68
143	12.16		1.06	2.58	100	13.29	2.10	2.22
190	10.89		0.87	2.06u	150	11.92	1.03	
242	10.43		0.55	-	200	10.81	0.82	
284	9.88		0.46	-	250	10.33	0.52	
381	8.19		0.54	2.85	300	9.57	0.49	
476	7.39		0.34	2.98	400	8.05	0.52	
572	6.36		0.25	-	500	7.11	0.30	
763	5.02		0.28	-	600	6.10	0.25	
962	4.28		0.45	2.72u	700	5.37	0.26	
1161	3.72		0.69	3.11	800	4.87	0.30	
					1000	4.16	0.49	

HORIZON; December 1, 1951; 0242 GCT; 27°13'N, 116°31.5'W; sounding, 2300 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 20°. 120.60

0	20.58		4.99		0	20.58	4.99	
9	20.59	34.09	4.92		10	20.59	4.92	
23	20.56		4.94		20	20.57	4.93	
47	20.58		5.00		30	20.56	4.98	
70	14.13		4.73		50	20.58	5.00	
93	12.32		3.35		75	13.70	4.45	
141	10.22		2.48		100	11.72	3.26	
184	10.08		1.44		150	10.18	2.15	
226	9.61		1.07		200	9.90	1.28	
269	9.18		0.80		250	9.37	0.90	
362	7.94		0.64		300	8.79	0.69	
449	6.92		0.28		400	7.45	0.47	
540	6.42		0.32		500	6.66	0.32	
723	5.16		0.23		600	5.95	0.28	
907	4.32		0.47		700	5.30	0.22	
1105	3.76		0.76		800	4.77	0.30	
					1000	4.00	0.59	

HORIZON; November 30, 1951; 1758 GCT; 26°53'N, 117°10'W; sounding, 2030 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 08°. 120.70

0	19.40		5.05	0.59	0	19.40	5.05	0.59
10	19.42	33.77	5.10	0.62	10	19.42	5.10	0.62
25	19.39		5.03	0.62	20	19.40	5.08	0.62
50	19.48		4.96	0.64	30	19.40	5.01	0.62
74	15.03		5.44	0.75	50	19.48	4.96	0.64
98	12.34		4.95	1.11	75	14.90	5.43	0.76
149	9.84		3.17	1.99	100	12.16	4.87	1.16
195	9.36		2.22	2.48	150	9.83	3.15	2.04
241	8.71		1.89	2.26	200	9.29	2.18	2.48
288	8.30		1.25	-	250	8.64	1.81	
479	6.72		0.35	-	300	8.20	1.05	
577	6.11a)		0.24	3.07	400	7.33	0.48	
772	4.95		0.34	3.19	500	6.59	0.31	
963	4.20		0.44	3.29	600	5.96	0.22	3.09
1166	3.65		0.71	3.21	700	5.33	0.28	3.14
					800	4.82	0.33	3.22
					1000	4.08	0.48	3.28

a) Alternate value, 6.30°C, not used in interpolation.

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OBSERVED					INTERPOLATED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L
120.70	HORIZON; November 30, 1951; 2015 GCT;[a] 26°53'N, 117°10'W; sounding, 2030 fm; wind, 330°, force 4; weather, cloudy; sea, rough; wire angle, 10°.							
1377	3.12	34.61	0.96					
1379	3.14	34.61	1.00					
1381	3.10	34.61	1.08					
1383	3.12	34.67	1.03					
1385	3.11	34.70	0.99					
1387	3.13	34.60	1.00					
1389	3.12	34.61	0.99					
1391	3.12	34.61	1.03					
1393	3.12	34.63	1.00					
1395	3.10	34.63	0.99					
1397	3.09	34.70	0.98					
1399	3.08	34.67	0.99					
1401	3.06	34.61	0.96					
1403	3.04	34.61	1.01					
1404	3.06	34.60	1.03					
1406	3.07	34.60	1.03					
123.37	HORIZON; December 2, 1951; 0534 GCT; 27°26.5'N, 114°39'W; sounding, 39 fm; wind, 010°, force 3; weather, partly cloudy; sea, moderate; wire angle, 03°.							
0	21.03		4.98	0.46	0	21.03	4.98	0.46
10	21.08	34.10	4.80	0.44	10	21.08	4.80	0.44
20	21.08		4.99	0.44	20	21.08	4.99	0.44
30	21.12		5.11	-	30	21.12	5.11	
50	20.82		4.52	-	50	20.82	4.52	
123.40	HORIZON; December 2, 1951; 0353 GCT; 27°20'N, 114°50'W; sounding, 60 fm; wind, 310°, force 4; weather, partly cloudy; sea, very rough; wire angle, 10°.							
0	21.24		4.91	0.47	0	21.24	4.91	0.47
10	21.26	34.28	4.71u	0.50	10	21.26	4.91	0.50
20	21.22		4.91	0.57u	20	21.22	4.91	
29	21.32		4.77	-	30	21.32	4.75	
72	-		4.47	0.87	50	19.50	4.62	0.59
96	13.74		3.63	1.24	75	15.00	4.43	0.92
					100	(13.55)	(3.30)	(1.34)

a) Test cast.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
HORIZON; August 1, 1951; 0929 GCT; 40°27'N, 127°00'W; sounding, 1050 fm; wind, 360°, force 5; weather, missing; sea, high; wire angle, 15°.[a]									2
0	15.88	5.64	0.61		0	15.88	5.64	0.61	
10	15.89	5.60	0.61		10	15.89	5.60	0.61	
24	15.84	5.64	-		20	15.86	5.63		
48	11.56	5.81	-		30	15.81	5.69		
72	10.14	5.65	-		50	11.32	5.82		
96	9.16	5.30	-		75	10.00	5.55		
147	9.04	5.16	-		100	9.13	5.27		
192	8.44	4.67	-		150	9.02	5.13		
282	7.46	2.89	-		200	8.35	4.56		
377	6.72	1.78	-		250	7.79	3.62		
467	5.99	1.15	-		300	7.30	2.53		
563	5.11	0.56	-		400	6.54	1.62		
749	4.46	0.27	-		500	5.66	0.92		
936	3.72	0.28	-		600	4.94	0.45		
1134	3.13	0.51	-		700	4.60	0.28		
					800	4.28	0.27		
					1000	3.50	0.34		
HORIZON; August 1, 1951; 2112, 2344 GCT; 40°28'N, 129°05'W; sounding, 1740 fm; wind, 345°, force 5; weather, overcast; sea, very rough; wire angle, 10°, 00°.									3
0	16.46	5.42	0.65		0	16.46	5.42	0.65	
10	16.42	5.37	0.66		10	16.42	5.37	0.66	
25	15.28	5.67	0.62		20	16.15	5.46	0.63	
49	11.69	6.23	0.69		30	15.20	5.89	0.62	
74	9.23	6.14	1.04		50	11.67	6.23	0.71	
98	8.50	5.94	1.14		75	9.20	6.14	1.04	
151	7.74	4.73	1.92		100	8.46	5.91	1.16	
198	7.20	4.01	2.09		150	7.75	4.74	1.92	
290	6.13	2.60	2.61		200	7.16	3.99	2.11	
386	5.22	1.50	3.02		250	6.60	3.18	2.40	
480	4.64	1.02	3.28		300	6.03	2.45	2.66	
577	4.53	0.55	3.43		400	5.11	1.40	3.08	
770	4.04	0.24	3.63		500	4.60	0.93	3.31	
961	3.55	0.34	3.66		600	4.51	0.46	3.46	
1164	3.09	0.47	3.54		700	4.25	0.27	3.58	
					800	3.95	0.26	3.64	
692b)	4.27	0.23	3.38		1000	3.45	0.37	3.65	
1084	3.23	0.37	3.40		1200	3.04	0.51	3.52	
1476	2.65	0.69	3.36		1500	2.62	0.70	3.34	
1721	2.25	0.87	3.25		2000	1.96	1.27	3.19	
1975	1.98	1.22	3.20		2500	(1.75)	(1.70)	(3.07)	
2230	1.86	1.54	3.15						
2488	1.76	1.71	3.08						

a) No data obtained at Station 1 because of rough sea.
b) Overlapping casts.

SIO

NORTHERN HOLIDAY

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
4	HORIZON; August 2, 1951; 1535, 1820, 1935 GCT; 40°27'N, 131°06.5'W; sounding, 2030 fm; wind, 005°, force 3; weather, cloudy; sea, slight; wire angle, 18°, 10°, 19°.								
0	17.04	5.50	0.61		0	17.05	5.50	0.61	
9	17.04	5.40	0.62		10	17.04	5.42	0.62	
24	15.93	5.62	0.61		20	16.90	5.53	0.61	
48	12.72	6.19	0.69		30	15.85	5.71	0.62	
71	10.08	6.25	0.83		50	12.30	6.20	0.70	
94	8.78	5.99	1.06		75	9.75	6.22	0.87	
143	7.94	5.43	1.50		100	8.64	5.94	1.12	
187	7.40	4.38	1.95		150	7.85	5.29	1.59	
275	6.58	3.15	2.48		200	7.25	4.12	2.06	
368	5.75	1.74	3.02		250	6.80	3.49	2.37	
457	5.29	0.82	3.37		300	6.36	2.77	2.59	
552	4.74	0.56	3.41		400	5.56	1.35	3.19	
740	4.23	0.26	3.55		500	5.04	0.65	3.40	
930	3.68	0.27	3.65		600	4.61	0.49	3.44	
1133	3.19	0.50	3.29		700	4.36	0.29	3.52	
					800	4.03	0.26	3.59	
634a)	4.53	0.41	3.38		1000	3.50	0.33	3.65	
1052	3.48	1.09	3.08		1200	3.08	0.54	3.57	
1259	2.98	0.52	3.54		1500	2.56	0.81	3.44	
1529	2.51	0.83	3.43		2000	1.97	1.33	3.28	
					2500	1.74	1.78	3.17	
1791	2.12	1.12	3.37		3000	1.62	2.15	3.10	
2046	1.94	1.37	3.26						
2312	1.80	1.61	3.14						
2577	1.72	1.83	3.18						
2868	1.65	2.07	3.14						
3217	1.59	2.25	3.04						
5	HORIZON; August 3, 1951; 1120 GCT; 40°25'N, 133°00'W; sounding, 2100 fm; wind, 280°, force 1; weather, missing; sea, smooth; wire angle, 04°.								
0	18.23	5.42	0.59		0	18.23	5.42	0.59	
10	17.97	5.38	0.62		10	17.97	5.38	0.62	
25	15.42	5.66	0.62		20	17.80	5.51	0.62	
50	12.61	6.22	0.69		30	14.70	5.83	0.63	
75	9.34	6.16	0.99		50	12.61	6.22	0.69	
99	8.78	6.08	1.06		75	9.38	6.16	0.99	
153	8.15	5.25	1.54		100	8.76	6.07	1.06	
199	7.47	3.66	2.25		150	8.18	5.38	1.48	
293	6.46	2.46	2.65		200	7.46	3.62	2.27	
393	5.56	1.58	3.06		250	6.90	2.87	2.50	
487	4.98	0.74	3.40		300	6.39	2.40	2.68	
587	4.52	0.44	3.44		400	5.52	1.50	3.08	
782	4.00	0.27	3.54		500	4.92	0.68	3.42	
978	3.52	0.32	3.59		600	4.49	0.42	3.44	
1180	3.10	0.48	3.53		700	4.20	0.32	3.50	
					800	3.95	0.28	3.55	
					1000	3.48	0.34	3.59	
					1200	(3.08)	(0.49)	(3.53)	

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; August 4, 1951; 0702, 0900 GCT; 40°29'N, 135°00'W; sounding, 2240 fm; wind, 340°, force 2; weather, missing; sea, slight; wire angle, 15°, 12°. 6

0	19.67	5.09	0.56	0	19.67	5.09	0.56
9	19.46	5.29	0.54	10	19.44	5.26	0.54
24	17.28	5.58	0.54	20	18.60	5.49	0.54
48	13.97	6.19	0.57	30	16.44	5.72	0.55
72	11.25	6.42	0.62	50	13.65	6.22	0.57
95	9.74	6.12	0.84	75	11.00	6.41	0.64
144	8.40	5.55	1.27	100	9.55	6.03	0.88
187	7.71	4.38	1.98	150	8.31	5.28	1.40
278	6.62	3.44	2.34	200	7.53	4.22	2.06
373	5.60	2.30	2.88	250	6.93	3.72	2.23
464	4.80	1.38	3.22	300	6.36	3.19	2.47
559	4.26	0.81	3.34	400	5.36	2.00	3.01
751	3.82	0.33	3.49	500	4.58	1.17	3.27
944	3.40	0.24	3.56	600	4.17	0.58	3.38
1150	3.04	0.41	3.50	700	3.95	0.38	3.46
				800	3.74	0.29	3.52
579a)	4.21	0.68	3.39	1000	3.30	0.28	3.55
962	3.46	0.26	3.43	1200	2.96	0.40	3.49
1155	3.05	0.35	3.43	1500	2.47	0.67	3.44
1446	2.50	0.55	3.46	2000	1.92	1.37	3.23
1688	2.17	0.95	3.34	2500	1.72	1.77	3.11
1935	1.97	1.28	3.24	3000	1.61	2.14	3.07
2184	1.82	1.53	3.22				
2435	1.73	1.72	3.12				
2701	1.66	1.93	3.11				
3006	1.60	2.15	3.07				

HORIZON; August 5, 1951; 0723, 0935 GCT; 40°38.5'N, 137°35'W; sounding, 2250 fm; wind, 205°, force 3; weather, missing; sea, slight; wire angle, 15°, 16°. 7

0	20.18	5.22	0.51	0	20.18	5.22	0.51
10	19.68	5.21	0.52	10	19.68	5.21	0.52
24	17.48	5.63	0.52	20	18.55	5.33	0.52
48	13.14	6.32	0.53	30	15.80	5.89	0.52
72	12.21	6.11	0.55	50	13.03	6.32	0.53
95	11.22	5.77	0.64	75	12.13	6.05	0.57
145	9.39	5.41	1.15	100	11.00	5.71	0.67
191	8.56	4.72	1.63	150	9.30	5.37	1.20
282	7.44	4.43	1.88	200	8.45	4.66	1.67
380	6.06	3.36	2.40	250	7.83	4.52	1.82
471	5.01	2.07	2.99	300	7.22	4.31	1.93
568	4.44	1.15	3.27	400	5.81	3.06	2.55
761	3.94	0.35	3.44	500	4.77	1.73	3.11
952	3.48	0.23	3.57	600	4.34	0.95	3.31
1154	2.96	0.28	3.52	700	4.08	0.50	3.40
				800	3.83	0.30	3.48
578a)	4.49	1.06	2.98	1000	3.36	0.24	3.57
960	3.44	0.23	3.36	1200	2.89	0.29	3.50
1152	3.02	0.27	3.37	1500	2.37	0.52	3.40
1444	2.46	0.41	3.41	2000	1.97	1.23	3.30
1683	2.14	0.78	3.40	2500	1.74	1.73	3.08
1931	1.99	1.15	3.34	3000	(1.60)	(2.17)	(2.95)
2179	1.83	1.39	3.18				
2432	1.76	1.65	3.09				
2696	1.66	1.90	3.06				
2994	1.60	2.16	2.95				

a) Overlapping casts.

SIO

NORTHERN HOLIDAY

	OBSERVED				INTERPOLATED				
	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
8	HORIZON; August 5, 1951; 2035, 2238 GCT; 40°21.5'N, 139°24.5'W; sounding, 2380 fm; wind, 310°, force 2; weather, cloudy; sea, slight; wire angle, 04°, 11°.								
	0	20.56	5.01	0.45		0	20.56	5.01	0.45
	10	20.33	5.02	0.44		10	20.33	5.02	0.44
	25	17.60	5.62	0.43		20	19.50	5.25	0.43
	50	12.80	6.10	0.47		30	15.83	5.84	0.43
	75	11.32	5.90	0.57		50	12.80	6.10	0.47
	99	10.35	5.62	0.74		75	11.32	5.90	0.57
	150	9.14	5.05	1.27		100	10.31	5.60	0.76
	198	8.71	4.67	1.51		150	9.14	5.05	1.27
	292	7.32	4.18	1.94		200	8.69	4.64	1.52
	391	5.87	3.26	2.46		250	8.03	4.42	1.74
	488	5.04	2.11	2.97		300	7.20	4.13	1.98
	587	4.37	1.19	3.20		400	5.75	3.13	2.51
	784	3.71	0.41	3.44		500	4.97	2.00	3.01
	980	3.26	0.25	3.52		600	4.30	1.14	3.22
	1187	2.88	0.27	3.53		700	3.94	0.68	3.35
						800	3.68	0.37	3.45
	587a)	4.40	1.19	3.22		1000	3.20	0.24	3.50
	969	3.28	0.23	3.50		1200	2.85	0.27	3.48
	1160	2.92	0.27	3.48		1500	2.42	0.47	3.40
	1453	2.45	0.37	3.42		2000	1.94	1.28	3.20
	1695	2.16	0.80	3.34		2500	1.72	1.83	3.08
	1943	1.98	1.20	3.22		3000	1.56	2.28	3.03
	2192	1.82	1.49	3.14					
	2445	1.73	1.76	3.10					
	2709	1.64	2.03	3.04					
	3008	1.56	2.28	3.03					
9	HORIZON; August 7, 1951; 0332, 0520 GCT; 40°28'N, 141°55'W; sounding, 0332 fm; wind, 055°, force 2; weather, partly cloudy; sea, slight; wire angle, 05°, 05°.								
	0	20.47	5.02	0.48		0	20.47	5.02	0.48
	10	19.76	5.12	0.49		10	19.76	5.12	0.49
	25	15.16	5.94	0.47		20	17.96	5.61	0.48
	50	11.41	6.26	0.57		30	13.80	6.05	0.47
	75	10.16	5.74	0.78		50	11.41	6.26	0.57
	99	10.13	5.65	0.79		75	10.16	5.74	0.72
	152	8.97	5.29	1.16		100	10.13	5.66	0.86
	199	8.98	4.71	1.46		150	8.97	5.32	1.15
	295	7.42	4.24	1.87		200	8.97	4.70	1.47
	394	6.09	3.44	2.29		250	8.21	4.45	1.69
	490	5.05	2.29	2.84		300	7.35	4.22	1.87
	591	4.33	1.34	3.09		400	6.02	3.39	2.34
	786	3.71	0.57	3.33		500	4.97	2.13	2.87
	976	3.27	0.32	3.41		600	4.31	1.23	3.11
	1176	2.87	0.29	3.44		700	3.96	0.80	3.26
						800	3.68	0.53	3.34
	591a)	4.36	1.25	-		1000	3.22	0.27	3.42
	980	3.26	0.26	-		1200	2.86	0.26	(3.44)
	1174	2.90	0.23	-		1500	2.44	0.46	
	1470	2.46	0.40	-		2000	1.98	1.21	
	1715	2.16	0.78	-		2500	1.73	1.68	
	1966	2.00	1.18	-		3000	1.57	2.15	
	2217	1.84	1.41	-					
	2472	1.72	1.66	-					
	2739	1.63	2.00	-					
	3043	1.56	2.29	-					

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; August 8, 1951; 0845, 1030 GCT; 40°30'N, 143°35'W; sounding, 2550 fm; wind, 070°, force 2; weather, missing; sea, smooth; wire angle, 13°, 16°. . 10

0	20.33	5.12	0.48	0	20.33	5.12	0.48
10	19.94	4.85	0.49	10	19.94	4.85	0.49
25	18.46	5.18	0.49	20	19.45	5.00	0.49
49	11.17	6.22	0.56	30	16.93	5.60	0.50
73	10.24	5.77	0.75	50	11.14	6.22	0.57
97	9.48	5.56	0.86	75	10.16	5.75	0.77
148	8.62	5.34	1.28	100	9.41	5.54	0.87
193	8.43	4.64	1.56	150	8.61	5.33	1.30
285	7.58	4.30	1.84	200	8.39	4.63	1.58
382	5.83	3.31	2.39	250	7.95	4.47	1.74
475	5.08	2.28	2.79	300	7.38	4.19	1.90
572	4.41	1.41	3.03	400	5.67	3.11	2.47
765	3.75	0.56	3.26	500	4.89	2.02	2.87
957	3.28	0.34	3.31	600	4.28	1.24	3.07
1159	2.94	0.30	3.35	700	3.94	0.76	3.21
				800	3.66	0.50	3.28
566a)	4.48	1.49	3.00	1000	3.21	0.32	3.38
942	3.31	0.36	3.34	1200	2.88	0.30	3.45
1130	2.98	0.29	3.44	1500	2.39	0.54	3.31
1418	2.52	0.42	3.40	2000	1.92	1.27	3.21
1653	2.18	0.75	3.27	2500	1.70	1.83	2.98
1897	1.98	1.15	3.27	2900	1.58	2.29	2.94
2142	1.83	-	3.06				
2389	1.74	1.71	2.98				
2650	1.65	2.00	2.95				
2947	1.57	2.36	2.94				

HORIZON; August 9, 1951; 0855, 1055 GCT; 40°29.5'N, 145°45'W; sounding, 2500 fm; wind, 150°, force 2; weather, missing; sea, slight; wire angle, 08°, missing. 11

0	20.63	5.09	0.39	0	20.63	5.09	0.39
10	20.14	5.15	0.39	10	20.14	5.15	0.39
25	18.65	5.43	0.34	20	19.07	5.33	0.36
50	12.96	6.17	0.39	30	18.05	5.56	0.34
74	11.12	6.15	0.58	50	12.96	6.17	0.39
99	8.86	5.43	0.91	75	11.10	6.15	0.62
151	9.54	5.12	1.11	100	8.86	5.42	0.91
199	9.02	4.71	1.41	150	9.53	5.13	1.12
293	7.55	4.22	1.82	200	9.00	4.69	1.41
392	6.19	3.76	2.18	250	8.22	4.37	1.65
486	5.24	2.62	2.66	300	7.46	4.20	1.84
586	4.46	1.49	3.04	400	6.11	3.69	2.22
782	3.80	0.58	3.34	500	5.13	2.43	2.72
976	3.30	0.37	3.42	600	4.37	1.39	3.08
1179	2.91	0.28	3.53	700	4.02	0.89	3.28
				800	3.75	0.52	3.35
581a)	4.55	1.53	2.76	1000	3.24	0.34	3.44
968	3.26	0.36	3.19	1200	2.90	0.31	3.52
1160	2.90	0.26	3.29	1500	2.40	0.47	3.28
1454	2.48	0.40	3.29	2000	1.93	1.22	3.15
1695	2.17	0.77	3.24	2500	1.71	1.78	2.97
1944	1.98	1.15	3.17	3000	1.56	2.33	2.90
2196	1.83	1.42	3.05				
2449	1.72	1.72	2.97				
2714	1.63	2.02	2.97				
3012	1.55	2.35	2.90				

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
12	HORIZON; August 10, 1951; 0037, 0233 GCT; 40°33'N, 147°56'W; sounding, 2500 fm; wind, 160°, force 3; weather, cloudy; sea, moderate; wire angle, 16°, 24°.								
0	20.54	5.00	0.48		0	20.54	5.00	0.48	
9	19.37	5.20	0.45		10	19.28	5.20	0.44	
24	17.53	5.44	0.44		20	19.15	5.38	0.44	
48	11.71	6.23	0.57		30	15.80	5.57	0.46	
71	10.46	5.69	0.76		50	11.53	6.23	0.58	
94	9.84	5.48	0.89		75	10.35	5.64	0.79	
145	9.28	4.97	1.25		100	9.76	5.44	0.93	
191	8.78	4.61	1.44		150	9.22	4.91	1.27	
282	7.66	4.20	1.82		200	8.65	4.56	1.48	
380	6.10	3.68	2.17		250	8.03	4.34	1.69	
471	5.22	2.49	2.78		300	7.41	4.12	1.88	
570	4.50	1.65	3.11		400	5.88	3.43	2.27	
762	3.80	0.67	3.42		500	4.99	2.12	2.91	
954	3.29	0.42	3.50		600	4.36	1.42	3.18	
1157	2.84	0.31	3.48		700	3.99	0.85	3.35	
					800	3.70	0.63	3.45	
556a)	4.72	1.80	2.70		1000	3.20	0.36	3.50	
928	3.34	0.47	3.18		1200	2.74	0.31	3.47	
1113	2.98	0.29	3.30		1500	2.38	0.50	3.37	
1398	2.53	0.37	3.42		2000	1.94	1.15	3.17	
1633	2.22	0.63	3.33		2500	1.71	1.78	3.01	
1877	2.02	1.00	3.27		2900	1.58	2.28	2.96	
2133	1.85	1.31	3.07						
2376	1.76	1.63	3.05						
2643	1.66	1.96	2.97						
2942	1.58	2.35	2.97						
13	HORIZON; August 10, 1951; 1905, 2115 GCT; 40°32'N, 149°43.5'W; sounding, 2550 fm; wind, 240°, force 3; weather, cloudy; sea, moderate; wire angle, 18°, missing.								
0	20.51	4.98	0.40		0	20.51	4.98	0.40	
9	20.50	5.02	0.37		10	20.50	5.02	0.37	
24	18.60	5.13	0.40		20	19.50	5.09	0.38	
52	12.06	5.85	0.61		30	18.00	5.22	0.43	
75	10.71	5.04	0.82		50	12.50	5.84	0.59	
103	9.90	5.40	0.90		75	10.71	5.04	0.82	
151	8.79	5.29	1.18		100	9.98	5.38	0.89	
200	9.32	4.65	1.40		150	8.79	5.30	1.17	
299	7.84	4.18	1.86		200	9.32	4.65	1.40	
402	6.04	3.51	2.32		250	8.74	4.35	1.63	
501	5.11	2.38	2.90		300	7.85	4.18	1.86	
601	4.42	1.46	3.19		400	6.17	3.53	2.30	
801	3.73	0.63	3.49		500	5.14	2.40	2.89	
1004	3.17	0.40	3.57		600	4.44	1.48	3.19	
1206	2.80	0.36	3.58		700	3.99	0.87	3.36	
					800	3.74	0.64	3.49	
628a)	4.26	1.18	2.79		1000	3.19	0.38	3.57	
1045	3.11	0.30	3.07		1200	2.82	0.32	3.58	
1253	2.74	0.26	3.24		1500	2.43	0.34	3.28	
1570	2.34	0.40	3.25		2000	1.93	1.11	3.17	
1832	2.04	0.86	3.20		2500	1.67	1.63	2.88	
2096	1.89	1.23	3.15		3000	1.57	2.24	2.81	
2358	1.74	1.47	2.89						
2631	1.63	1.80	2.88						
2927	1.57	2.17	2.82						
3275	1.49	2.48	2.80						

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; August 11, 1951; 1331, 1605 GCT; 41°42'N, 150°00'W; sounding, 2580 fm; wind, 255°, force 2; weather, missing; sea, slight; wire angle, 09°, 20°. 14

0	19.71	4.90	0.45	0	19.71	4.90	0.45
10	19.64	4.86	0.43	10	19.64	4.86	0.43
25	17.06	5.47	0.43	20	18.50	5.23	0.43
50	11.27	5.84	0.75	30	15.30	5.64	0.45
74	9.41	5.65	1.02	50	11.27	5.84	0.75
98	8.76	5.54	1.05	75	9.40	5.64	1.03
150	9.08	4.97	1.20	100	8.74	5.52	1.05
196	8.88	4.70	1.42	150	9.08	4.97	1.20
288	7.28	4.01	1.86	200	8.83	4.68	1.45
386	5.86	3.54	2.28	250	8.04	4.29	1.69
479	5.06	2.35	2.76	300	7.08	3.96	1.91
577	4.42	1.53	3.00	400	5.71	3.41	2.36
769	3.72	0.70	3.30	500	4.92	2.14	2.84
963	3.26	0.46	3.38	600	4.31	1.38	3.04
1164	2.90	0.35	3.40	700	3.94	0.93	3.20
				800	3.63	0.64	3.33
567a)	4.67	1.80	2.80	1000	3.17	0.41	3.38
939	3.32	0.43	3.24	1200	2.83	0.36	3.40
1127	2.98	0.30	3.39	1500	2.40	0.45	3.37
1412	2.44	0.31	3.41	2000	1.94	1.13	3.22
1649	2.22	0.63	3.33	2500	1.72	1.85	3.01
1891	2.01	0.99	3.27	2900	1.58	2.28	3.00
2138	1.86	1.29	3.13				
2383	1.77	1.69	3.02				
2647	1.66	2.01	3.00				
2944	1.58	2.32	3.00				

HORIZON; August 12, 1951; 0354, 0537 GCT; 43°08.5'N, 149°58'W; sounding, 2810 fm; wind, 230°, force 4; weather, overcast; sea, rough; wire angle, 21°, 21°. 15

0	18.93	5.50	0.46	0	18.93	5.50	0.46
10	18.88	5.37	0.47	10	18.88	5.37	0.47
24	16.56	5.79	0.63	20	17.60	5.59	0.59
52	11.29	6.15	0.80	30	15.40	5.92	0.67
74	9.87	6.11	1.00	50	11.66	6.15	0.78
100	8.56	6.04	1.10	75	9.87	6.10	1.01
148	8.04	5.75	1.29	100	8.56	6.04	1.10
195	8.12	4.83	1.56	150	8.05	5.72	1.30
288	6.70	4.12	2.01	200	8.09	4.78	1.59
387	5.38	3.10	2.52	250	7.31	4.40	1.85
483	4.66	1.97	3.05	300	6.52	4.02	2.06
580	4.18	1.29	3.17	400	5.25	2.94	2.59
772	3.65	0.66	3.34	500	4.57	1.83	3.09
974	3.16	0.45	3.40	600	4.10	1.17	3.18
1174	2.82	0.39	3.47	700	3.82	0.81	3.28
				800	3.60	0.62	3.36
594a)	4.20	1.20	3.07	1000	3.12	0.41	3.41
992	3.12	0.37	3.36	1200	2.76	0.37	3.48
1190	2.78	0.33	3.40	1500	2.36	0.47	3.41
1490	2.37	0.45	3.41	2000	1.93	1.07	3.21
1746	2.12	0.72	3.35	2500	1.72	1.82	3.00
2003	1.94	1.08	3.21	3000	1.57	2.43	2.92
2267	1.78	1.43	3.04				
2533	1.71	1.86	2.99				
2829	1.62	2.23	2.95				
3179	1.53	2.57	2.90				

a) Overlapping casts.

16

HORIZON; August 12, 1951; 1840, 2110 GCT; 44°35'N, 150°21.5'W; sounding, 2500+ fm; wind, 360°, force 6; weather, overcast; sea, high; wire angle, 29°, 21°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	17.01	5.30	0.75		0	17.01	5.30	0.75	
8	16.98	5.17	0.74		10	16.96	5.18	0.74	
22	14.29	6.04	0.81		20	14.70	6.01	0.78	
44	9.28	5.93	1.28		30	12.05	6.03	0.92	
65	7.92	5.89	1.42		50	8.80	5.89	1.36	
86	6.98	5.96	1.44		75	7.17	5.94	1.43	
128	6.90	5.79	1.42		100	6.93	5.96	1.43	
164	7.00	4.45	1.78		150	6.98	5.33	1.56	
238	6.00	3.78	2.20		200	6.64	4.09	2.00	
320	5.14	2.92	2.61		250	5.84	3.67	2.25	
396	4.63	2.07	3.00		300	5.33	3.14	2.49	
481	4.26	1.43	3.11		400	4.62	2.02	3.01	
649	3.75	0.77	3.34		500	4.20	1.32	3.14	
824	3.32	0.55	3.45		600	3.88	0.90	3.28	
1017	2.96	0.41	3.49		700	3.61	0.68	3.38	
					800	3.38	0.57	3.44	
621a)	3.92	0.84	2.96		1000	2.99	0.40	3.48	
1037	2.99	0.35	3.16		1200	2.72	0.33	3.46	
1246	2.65	0.32	3.44		1500	2.36	0.39	3.22	
1564	2.28	0.42	3.23		2000	1.92	1.01	3.16	
1840	2.04	0.77	3.21		2500	1.70	1.66	3.04	
2136	1.86	1.19	3.13		3000	1.57	2.33	2.83	
2417	1.72	1.47	3.08						
2702	1.66	2.02	2.96						
3041	1.57	2.35	2.82						

17

HORIZON; August 13, 1951; 0950, 1015, 1220 GCT; 45°59'N, 150°06.5'W; sounding, 2500+ fm; wind, 260°, force 5; weather, missing; sea, rough; wire angle, 10°, 15°, 08°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	16.99	5.44	0.98		0	16.99	5.44	0.98	
10	15.59	5.56	0.96		10	15.59	5.56	0.96	
25	11.45	6.64	0.78		20	13.40	6.52	0.82	
49	8.36	6.08	1.30		30	10.35	6.64	0.78	
74	6.62	6.28	1.56		50	8.30	6.08	1.32	
98	6.01	6.25	1.55		75	6.63	6.29	1.56	
					100	6.02	6.24	1.55	
150	6.30	5.34	1.74		150	6.30	5.34	1.74	
195	6.26	4.07	2.03		200	6.24	4.01	2.06	
287	5.03	3.12	2.50		250	5.57	3.48	2.32	
382	4.43	2.04	2.93		300	4.93	2.97	2.56	
474	4.17	1.33	3.19		400	4.37	1.89	3.00	
572	3.87	0.99	3.25		500	4.08	1.22	3.22	
764	3.44	0.59	3.37		600	3.82	0.93	3.27	
955	3.02	0.48	3.36		700	3.61	0.71	3.34	
1156	2.72	0.39	3.34		800	3.34	0.57	3.36	
					1000	2.96	0.46	3.36	
627a)	3.82	0.87	3.10		1200	2.65	0.40	3.40	
1034	2.91	0.44	3.29		1500	2.32	0.49	3.36	
1236	2.60	0.41	3.39		2000	1.94	1.15	3.25	
1541	2.28	0.51	3.35		2500	1.70	1.82	3.11	
1795	2.06	0.84	3.32		3000	1.59	2.41	2.99	
2047	1.92	1.20	3.23						
2301	1.77	1.54	3.18						
2554	1.70	1.88	3.10						
2831	1.62	2.24	3.04						
3161	1.55	2.55	2.96						

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; August 13-14, 1951; 2350, 0202 GCT; 47°26'N, 150°00'W; sounding, 2500+ fm; wind, 270°, force 6; weather, cloudy; sea, high; wire angle, 15°, 04°. 18

0	-	5.72	1.03	0	(14.72)	5.72	1.03
9	14.66	5.60	1.04	10	14.65	5.60	1.04
24	11.10	6.47	1.08	20	13.00	6.10	1.06
53	7.11	6.34	1.39	30	10.20	6.49	1.13
77	5.83	6.27	1.51	50	7.50	6.36	1.36
105	5.50	6.44	1.56	75	5.85	6.27	1.51
157	5.69	4.20	1.99	100	5.53	6.42	1.55
208	5.30	3.45	2.23	150	5.69	4.47	1.94
308	4.56	2.27	2.83	200	5.37	3.55	2.20
416	4.19	1.44	3.03	250	4.97	2.86	2.50
517	3.90	0.99	3.16	300	4.62	2.33	2.80
620	3.60	0.76	3.19	400	4.23	1.52	3.02
824	3.20	0.61	3.23	500	3.94	1.06	3.14
1030	2.82	0.52	3.30	600	3.65	0.73	3.19
1232	2.56	0.55	3.28	700	3.44	0.67	3.22
				800	3.27	0.63	3.23
630a)	3.62	0.64	2.92	1000	2.86	0.48	3.29
1048	2.86	0.42	2.90	1200	2.60	0.47	3.28
1257	2.58	0.41	3.07	1500	2.30	0.50	3.12
1572	2.24	0.51	3.10	2000	1.95	1.01	3.02
1837	2.06	0.81	3.06	2500	1.71	1.83	2.83
2103	1.90	1.13	3.00	3000	1.59	2.40	2.68
2368	1.75	1.67	2.89				
2638	1.69	1.97	2.77				
2935	1.60	2.34	2.69				
3283	1.52	2.59	2.65				

HORIZON; August 14, 1951; 1945 GCT; 48°48'N, 150°00'W; sounding, 2600 fm; wind, 270°, force 7; weather, cloudy; sea, high; wire angle, 55°. 19

0	-	5.35	1.03	0	(13.55)	5.35	1.03
6	13.53	5.34	1.02	10	13.53	5.40	1.02
15	13.51	5.44	1.04	20	13.46	5.46	1.05
32	13.08	5.52	1.06	30	13.16	5.51	1.06
43	8.26	5.86	1.40	50	6.78	6.00	1.44
56	6.06	6.05	1.46	75	5.26	6.10	1.51
81	5.09	6.09	1.51	100	4.63	6.03	1.53
104	4.54	6.01	1.54	150	4.02	4.00	2.24
152	4.01	3.91	2.25	200	3.93	2.92	2.53
202	3.92	2.88	2.54	250	3.83	2.11	2.86
250	3.83	2.11	2.86	300	3.82	1.46	2.99
295	3.83	1.50	2.98	400	3.79	0.80	3.12
299	3.82	1.50	2.76	500	3.67	0.68	3.11
388	3.80	0.83	3.12				
523b)	3.63	0.68	3.11				

a) Overlapping casts.
b) Deep cast not possible because of rough sea.

SIO

NORTHERN HOLIDAY

21

HORIZON; August 16, 1951; 0047, 0303 GCT; 51°34.5'N, 149°58'W; sounding, 2420 fm; wind, 260°, force 4; weather, cloudy; sea, rough; wire angle, 15°, 26°.[a]

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	11.59	6.09	1.28		0	11.59	6.09	1.28	
10	11.53	6.08	1.27		10	11.53	6.08	1.27	
24	11.16	6.01	1.34		20	11.33	6.03	1.30	
53	4.42	5.97	1.79		30	9.75	5.98	1.44	
77	3.58	6.60	1.96		50	5.00	5.97	1.75	
107	3.32	6.24	2.06		75	3.62	6.60	1.96	
159	3.89	2.43	2.88		100	3.34	6.40	2.02	
209	3.87	1.46	3.14		150	3.86	2.81	2.80	
307	3.78	0.83	3.34		200	3.86	1.57	3.11	
409	3.66	0.61	3.43		250	3.82	1.13	3.25	
508	3.52	0.59	3.45		300	3.78	0.88	3.33	
607	3.36	0.56	3.28		400	3.67	0.62	3.43	
808	3.04	0.61	3.35		500	3.54	0.60	3.44	
1016	2.76	0.61	3.31		600	3.36	0.55	3.43	
1219	2.52	0.67	3.28		700	3.22	0.61	3.39	
					800	3.06	0.62	3.35	
589b)	3.38	0.53	3.16		1000	2.78	0.58	3.31	
984	2.81	0.56	3.22		1200	2.53	0.60	3.29	
1182	2.53	0.52	3.14		1500	2.27	0.69	3.22	
1482	2.28	0.68	3.22		2000	1.95	1.23	3.23	
1736	2.09	0.88	3.20		2500	1.75	1.80	3.08	
1993	1.94	1.22	3.23		3000	1.57	2.31	2.95	
2257	1.80	1.51	3.17						
2523	1.74	1.82	3.07						
2818	1.63	2.14	2.95						
3165	1.56	2.43	2.95						

22A

HORIZON; August 16, 1951; 2119, 2335 GCT; 52°49'N, 149°52.5'W; sounding, 2200 fm; wind, 210°, force 3; weather, cloudy; sea, moderate; wire angle, 12°, 26°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	12.02	5.33	1.21		0	12.02	5.33	1.21	
10	11.93	5.53	1.19		10	11.93	5.53	1.19	
25	11.72	5.77	1.22		20	11.85	5.72	1.20	
54	4.37	5.66	1.90		30	9.40	5.77	1.34	
78	3.35	5.75	2.16		50	5.00	5.69	1.82	
107	3.93	3.32	2.65		75	3.35	5.76	2.14	
159	4.06	0.98	3.20		100	3.86	3.93	2.52	
210	3.95	0.61	3.26		150	4.03	1.15	3.17	
311	3.80	0.48	3.38		200	3.97	0.65	3.25	
417	3.60	0.48	3.32		250	3.88	0.51	3.32	
519	3.44	0.40	3.45		300	3.81	0.48	3.38	
621	3.24	0.44	3.44		400	3.63	0.48	3.32	
825	2.96	0.46	3.37		500	3.48	0.41	3.42	
1035	2.64	0.55	3.39		600	3.31	0.43	3.45	
1238	2.40	0.70	3.33		700	3.10	0.45	3.40	
					800	2.98	0.46	3.38	
549b)	3.43	0.39	3.19		1000	2.69	0.53	3.38	
900	2.84	0.44	3.24		1200	2.44	0.68	3.34	
1086	2.58	0.54	3.28		1500	2.16	0.95	3.15	
1359	2.27	0.78	3.22		2000	1.85	1.48	3.13	
1590	2.07	1.03	3.14		2500	1.69	2.04	3.08	
1831	1.94	1.26	3.16		2900	(1.57)	(2.44)	(3.04)	
2075	1.80	1.57	3.09						
2327	1.74	1.87	3.08						
2617	1.66	2.11	3.07						
2883	1.58	2.41	3.04						

a) No data obtained at Station 20.
b) Overlapping casts.

HORIZON; August 17, 1951; 0415 GCT; 52°51'N, 150°35'W; sounding, 2420 fm; wind, 250°, force 2; weather, cloudy; sea, slight; wire angle, 24°. 22B

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	12.47a)				0	12.47a)			
9	12.21				10	12.20			
23	11.89				20	11.96			
44	5.88				30	10.70			
64	4.11				50	5.19			
83	3.46				75	3.53			
125	3.94				100	3.53			
164	4.34				150	4.29			
242	3.94				200	4.21			
324	3.78				250	3.92			
401	3.72				300	3.81			
484	3.49				400	3.72			
662	3.22				500	3.47			
848	2.93				600	3.30			
1049	2.63				700	3.17			
					800	3.01			
					1000	2.71			

HORIZON; August 17, 1951; 0728, 0803 GCT; 52°41.5'N, 150°06'W; sounding, 2210 fm; wind, 255°, force 2; weather, missing; sea, slight; wire angle, 10°, missing. 22C

0	-				0	(12.00)			
10	11.98				10	11.98			
25	11.80				20	11.87			
49	4.67				30	10.90			
73	3.66				50	4.60			
96	3.49				75	3.62			
145	4.14				100	3.51			
191	4.01				150	4.14			
282	3.84				200	3.99			
					250	3.89			
380	3.70				300	3.81			
464	3.54				400	3.67			
570	3.38				500	3.48			
762	3.08				600	3.33			
954	2.77				700	3.18			
1039	2.66				800	3.01			
					1000	2.70			

HORIZON; August 17, 1951; 1054 GCT; 53°04'N, 150°05.5'W; sounding, 1054 fm; wind, 115°, force 1; weather, missing; sea, smooth; wire angle, 09°. 22D

0	12.46				0	12.46			
10	12.08				10	12.08			
25	11.70				20	11.93			
50	4.56				30	10.40			
74	3.52				50	4.56			
98	3.43				75	3.53			
149	4.10				100	3.46			
196	4.00				150	4.10			
289	3.83				200	3.99			
389	3.68				250	3.90			
482	3.51				300	3.82			
582	3.30				400	3.66			
776	3.02				500	3.48			
971	2.71				600	3.27			
1173	2.47				700	3.10			
					800	3.00			
					1000	2.67			

a) Bucket temperature.

22E

HORIZON; August 17, 1951; 1708 GCT; 52°54'N, 150°09'W; sounding, 650 fm; wind, 150°, force 1; weather, cloudy; sea, smooth; wire angle, 03°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	12.46				0	12.46			
10	11.77				10	11.77			
25	11.57				20	11.60			
50	5.20				30	10.45			
74	3.55				50	5.20			
98	3.69				75	3.55			
149	4.10				100	3.72			
196	4.06				150	4.10			
243	3.94				200	4.06			
290	3.82				250	3.93			
389	3.69				300	3.81			
484	3.46				400	3.67			
585	3.38				500	3.43			
682	3.20				600	3.36			
786	3.02				700	3.17			
					800	(3.00)			
					1000	(2.71)			

23

HORIZON; August 30, 1951; 0117 GCT; 56°28.5'N, 151°39'W; sounding, 890 fm; wind, 210°, force 4; weather, fog; sea, moderate; wire angle, 00°.

0	10.84	6.15	0.61	0	10.84	6.15	0.61
10	10.74	6.10	0.56	10	10.74	6.10	0.56
25	8.60	5.97	1.17	20	9.80	6.02	0.99
50	5.72	5.75	1.63	30	7.90	5.92	1.31
75	4.77	5.81	1.78	50	5.72	5.75	1.63
99	4.69	5.02	1.98	75	4.77	5.81	1.78
152	5.00	3.56	2.36	100	4.70	5.00	1.99
200	5.23	2.50	2.59	150	4.99	3.60	2.35
294	4.57	1.61	3.06	200	5.23	2.50	2.59
393	4.16	0.90	3.17	250	5.00	2.03	2.88
488	4.01	0.70	3.17	300	4.55	1.55	3.07
588	3.80	0.56	3.16	400	4.14	0.88	3.17
784	3.38	0.46	3.19	500	3.99	0.68	3.17
978a)	3.06	-	-	600	3.78	0.55	3.16
				700	3.56	0.49	3.18
				800	3.35	(0.46)	(3.19)
				1000	(3.01)		

a) Deep cast not possible because of shallow depth.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; August 30, 1951; 0724, 0934 GCT; 55°53'N, 151°15'W; sounding, 2980 fm; wind, 210°, force 3; weather, missing; sea, slight; wire angle, 11°, 13°. 24

0	12.32	6.23	0.54	0	12.32	6.23	0.54
10	12.26	6.15	0.52	10	12.26	6.15	0.52
25	8.45	6.01	1.20	20	10.80	6.05	0.98
49	5.13	5.86	1.59	30	7.30	5.97	1.31
73	4.46	5.76	1.77	50	5.05	5.85	1.60
97	4.53	5.10	1.87	75	4.45	5.73	1.78
147	5.44	2.85	2.33	100	4.58	4.87	1.89
192	5.22	2.18	2.59	150	5.44	2.78	2.37
282	4.51	1.28	2.94	200	5.14	2.08	2.62
378	4.09	0.81	3.02	250	4.71	1.57	2.84
469	3.94	0.62	3.07	300	4.42	1.18	2.97
567	3.77	0.51	3.02	400	4.03	0.74	3.03
758	3.47	0.47	3.03	500	3.90	0.58	3.06
				600	3.69	0.49	3.02
1038	2.94	0.42	2.86	700	3.54	0.47	3.03
1039	2.97	0.45	2.80	800	3.40	0.46	3.02
1248	2.61	0.56	2.89	1000	3.03	0.43	2.88
1561	2.24	0.80	2.84	1200	2.68	0.52	2.88
1826	2.06	1.07	2.81	1500	2.29	0.77	2.85
2086	1.89	1.40	2.84	2000	1.93	1.29	2.83
2352	1.75	1.59	2.74	2500	1.71	1.81	2.67
2617	1.69	1.98	2.63	3000	1.60	2.29	2.52
2911	1.62	2.20	2.53				
3257	1.54	2.61	2.54				

HORIZON; August 30, 1951; 1802, 2010 GCT; 54°55'N, 150°57'W; sounding, 2200 fm; wind, 240°, force 2; weather, partly cloudy; sea, smooth; wire angle, 07°, 09°. 25

0	12.81	6.03	0.70	13	0	12.81	6.03	0.70	13
10	12.75	6.04	0.66	13	10	12.75	6.04	0.66	13
25	8.58	6.26	1.18	18	20	10.70	6.20	0.80	16
50	4.54	6.30	1.65	27	30	7.70	6.29	1.33	20
75	3.90	5.94	1.82	36	50	4.54	6.30	1.65	27
99	4.15	4.78	2.12	47	75	3.90	5.94	1.82	36
151	4.86	2.38	2.68	74	100	4.19	4.70	2.14	48
198	4.56	1.68	2.94	86	150	4.85	2.39	2.68	73
291	4.25	0.94	3.16	105	200	4.53	1.65	2.95	87
389	4.00	0.69	3.21	121	250	4.33	1.18	3.09	98
483	3.70	0.62	3.19	135	300	4.23	0.91	3.17	107
582	3.55	0.52	3.19	139	400	3.97	0.67	3.21	123
776	3.22	0.44	3.18	155	500	3.67	0.60	3.18	136
970	2.88	0.51	3.15	171	600	3.56	0.50	3.19	140
1172	2.60	0.56	3.07	178	700	3.37	0.45	3.19	148
					800	3.18	0.45	3.18	158
589a)	3.62	0.49	3.08	139	1000	2.82	0.52	3.15	173
973	2.85	0.45	3.06	172	1200	2.54	0.60	3.06	181
1167	2.59	0.59	3.06	181	1500	2.17	0.92	2.96	192
1460	2.20	0.84	2.98	189	2000	1.84	1.46	2.84	200
1701	2.03	1.11	2.91	199	2500	1.69	1.99	2.85	202
1950	1.88	1.40	2.85	199	3000	1.55	2.48	2.71	198
2199	1.74	1.69	2.83	202					
2451	1.69	1.94	2.87	202					
2715	1.62	2.17	2.70	199					
3012	1.54	2.50	2.71	198					

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
26	HORIZON; August 31, 1951; 0338, 0527 GCT; 54°07'N, 150°24'W; sounding, 1800 fm; wind, 120°, force 2; weather, overcast; sea, slight; wire angle, 10°, 12°.								
0	13.18	6.04	0.57	4	0	13.18	6.04	0.57	4
10	12.88	5.99	0.56	8	10	12.88	5.99	0.56	8
25	11.66	6.05	0.66	6	20	12.81	6.02	0.60	6
49	4.16	6.17	1.74	29	30	9.00	6.08	0.88	8
73	3.66	5.58	2.12	44	50	4.15	6.17	1.75	30
97	4.25	4.13	2.37	58	75	3.66	5.43	2.14	46
149	5.17	2.21	2.71	72	100	4.40	4.01	2.39	58
195	4.20	1.38	3.01	94	150	5.15	2.15	2.71	73
288	3.99	0.72	3.21	114	200	4.18	1.32	3.03	95
386	3.84	0.59	3.27	105	250	4.05	0.92	3.16	101
479	3.62	0.54	3.31	135	300	3.98	0.69	3.22	106
579	3.50	0.45	3.31	143	400	3.81	0.58	3.28	116
770	3.16	0.47	3.30	159	500	3.60	0.52	3.31	137
961	2.82	0.51	3.24	172	600	3.50	0.43	3.31	145
1161	2.51	0.63	3.24	155	700	3.32	0.48	3.30	153
					800	3.10	0.48	3.29	162
581a)	3.53	0.41	2.96	140	1000	2.80	0.50	3.23	174
960	2.84	0.46	3.04	135	1200	2.43	0.61	3.21	180
1151	2.54	0.56	3.04	179	1500	2.23	0.85	3.02	190
1443	2.25	0.78	3.04	187	2000	1.90	1.42	2.99	198
1680	2.08	1.01	3.00	194	2500	1.72	1.96	2.74	195
1927	1.92	1.34	3.02	198	3000	(1.58)	(2.46)	(2.73)	(194)
2176	1.79	1.56	2.88	198					
2429	1.74	1.90	2.74	-					
2696	1.66	2.11	2.77	193					
2996	1.58	2.46	2.73	194					
27	HORIZON; August 31, 1951; 1353, 1550 GCT; 53°12'N, 150°00'W; sounding, 2440 fm; wind, 130°, force 4; weather, missing; sea, slight; wire angle, 06°, 20°.								
0	13.18	5.86	1.01	28	0	13.18	5.86	1.01	28
10	13.18	5.93	1.05	23	10	13.18	5.93	1.05	23
25	10.91	6.15	1.22	27	20	12.80	6.07	1.12	24
55	4.16	6.41	1.90	38	30	10.13	6.22	1.28	30
79	3.60	6.33	1.97	41	50	5.40	6.39	1.56	37
109	3.69	4.70	2.42	60	75	3.62	6.35	1.90	41
161	4.10	1.31	3.16	94	100	3.63	5.69	2.25	52
213	4.00	0.67	3.32	110	150	4.07	1.59	3.07	89
317	3.77	0.49	3.40	125	200	4.03	0.78	3.29	108
426	3.61	0.47	3.34	135	250	3.91	0.55	3.37	117
531	3.44	0.46	3.34	146	300	3.79	0.50	3.39	124
636	3.26	0.46	3.28	155	400	3.63	0.48	3.35	133
842	2.93	0.44	3.30	168	500	3.50	0.46	3.34	143
1051	2.63	0.54	3.22	177	600	3.35	0.45	3.30	152
1270	2.38	0.73	3.20	187	700	3.12	0.47	3.28	160
					800	2.98	0.46	3.30	166
609a)	3.33	0.44	3.24	130	1000	2.73	0.53	3.24	175
1016	2.70	0.53	3.20	156	1200	2.46	0.69	3.20	186
1220	2.44	0.68	3.18	156	1500	2.16	0.94	3.09	177
1528	2.12	0.96	3.08	176	2000	1.87	1.51	2.98	175
1786	1.98	1.27	3.03	172	2500	1.66	2.10	2.85	184
2047	1.84	1.55	2.97	176	3000	1.56	2.47	2.82	179
2310	1.70	1.92	2.90	181					
2575	1.66	2.11	2.83	184					
2870	1.59	2.34	2.82	178					
3218	1.52	2.65	2.77	181					

a) Overlapping casts.

28

HORIZON; August 31, 1951; 0038, 0227, 0347 GCT; 53°17.5'N, 151°38'W; sounding, 2410 fm; wind, 135°, force 5; weather, overcast; sea, moderate; wire angle, 00°, 04°, 10°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	12.66	5.65	1.12	28	0	12.66	5.65	1.12	28
10	12.64	5.58	1.09	29	10	12.64	5.58	1.09	29
25	12.26	5.85	1.08	26	20	12.63	5.70	1.08	26
50	5.60	6.28	1.62	36	30	12.10	6.03	1.09	27
75	3.68	6.01	1.82	39	50	5.60	6.28	1.62	36
99	3.32	5.98	1.89	42	75	3.68	6.01	1.82	39
151	4.10	2.83	2.63	76	100	3.33	5.96	1.90	42
198	3.92	2.01	2.96	94	150	4.10	2.88	2.62	76
293	3.84	0.96	3.20	111	200	3.92	1.99	2.98	95
392	3.71	0.72	3.30	124	250	3.85	1.31	3.13	105
486	3.59	0.57	3.28	138	300	3.84	0.91	3.21	112
586	3.40	0.51	3.24	149	400	3.70	0.72	3.30	125
782	3.10	0.47	3.24	155	500	3.57	0.56	3.28	140
977	2.81	0.63	3.20	166	600	3.38	0.48	3.24	150
1180	2.53	0.59	3.18	181	700	3.19	0.47	3.24	153
					800	3.07	0.49	3.24	156
592a)	3.40	0.47	3.00	-	1000	2.78	0.56	3.20	168
984	2.81	0.49	2.98	-	1200	2.54	0.59	3.18	182
1178	2.55	0.59	3.07	-	1500	2.20	0.77	3.09	189
1467	2.22	0.76	3.09	189	2000	1.87	1.38	3.02	198
					2500	1.73	2.03	2.86	196
1713	2.05	1.00	3.04	-	3000	1.58	2.41	2.81	191
1955	1.90	1.32	3.03	197					
2205	1.76	1.63	2.91	-					
2455	1.72	2.00	2.88	-					
2718	1.64	2.18	2.80	-					
3014	1.56	2.43	2.81	191					

29

HORIZON; September 1, 1951; 1305, 1515 GCT; 53°29'N, 153°17'W; sounding, 2500 fm; wind, 140°, force 4; weather, missing; sea, smooth; wire angle, 26°, 38°.

0	12.08	6.06	1.10	0	12.08	6.06	1.10
10	12.07	6.00	1.10	10	12.07	6.00	1.10
24	12.05	6.13	1.10	20	12.06	6.04	1.10
53	6.15	6.65	1.68	30	12.04	6.24	1.13
75	4.10	6.68	1.86	50	6.95	6.62	1.63
100	3.50	6.46	1.92	75	4.10	6.68	1.86
144	4.10	2.39	2.81	100	3.50	6.46	1.92
189	4.07	1.27	2.98	150	4.10	2.19	2.83
280	3.90	0.54	3.22	200	4.03	1.14	3.02
375	3.74	0.51	3.28	250	3.94	0.68	3.17
468	3.60	0.46	3.25	300	3.87	0.52	3.24
561	3.40	0.42	3.16	400	3.69	0.49	3.28
748	3.08	0.46	3.13	500	3.55	0.42	3.28
946	2.78	0.51	3.16	600	3.31	0.44	3.29
1146	2.53	0.70	3.24	700	3.13	0.49	3.31
				800	2.96	0.48	3.31
444a)	3.61	0.41	3.27	1000	2.73	0.54	3.25
758	3.04	0.52	3.21	1200	2.47	0.68	3.18
921	2.80	0.49	3.20	1500	2.16	0.96	2.97
1172	2.43	0.59	3.12	2000	1.84	1.50	2.91
1389	2.24	0.79	3.06	2500	1.69	1.98	2.80
1602	2.07	1.06	2.94				
1824	1.90	1.36	2.94				
2053	1.84	1.53	2.90				
2318	1.75	1.78	2.84				
2644	1.64	2.10	2.76				

a) Overlapping casts.

30

HORIZON; September 2, 1951; 0010, 0152 GCT; 53°37.5'N, 154°57'W; sounding, 2400 fm; wind, 235°, force 4; weather, overcast; sea, moderate; wire angle, 08°, 18°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	12.06	5.80	1.06	20	0	12.06	5.80	1.06	20
10	12.02	5.81	1.04	21	10	12.02	5.81	1.04	21
25	11.92	5.86	0.96	18	20	11.95	5.84	0.96	19
49	4.64	6.04	1.77	35	30	10.40	5.90	0.97	18
73	3.68	5.81	1.97	47	50	4.65	6.04	1.78	36
97	3.91	3.34	2.45	72	75	3.68	5.73	2.00	47
147	4.10	0.99	2.86	99	100	3.94	3.05	2.48	75
193	3.98	0.67	3.10	109	150	4.10	0.96	2.88	99
286	3.77	0.56	3.12	130	200	3.95	0.65	3.10	111
383	3.60	0.51	3.13	135	250	3.84	0.59	3.11	125
475	3.49	0.45	3.22	143	300	3.74	0.55	3.12	131
572	3.27	0.44	3.16	-	400	3.57	0.49	3.15	137
766	3.00	0.48	3.03	157	500	3.46	0.44	3.22	145
958	2.70	0.59	3.02	164	600	3.23	0.46	3.14	150
1159	2.45	0.72	3.00	175	700	3.10	0.47	3.07	155
					800	2.94	0.48	3.03	159
605a)	3.25	0.42	-	-	1000	2.66	0.58	3.03	166
1008	2.64	0.52	-	-	1200	2.43	0.72	3.00	176
1211	2.42	0.66	-	-	1500	2.17	0.86	2.88	180
1518	2.15	0.88	2.87	180	2000	1.87	1.43	2.77	187
1773	1.99	1.17	-	-	2500	1.67	2.08	2.67	185
2030	1.85	1.47	2.76	187	3000	1.57	2.53	2.62	184
2292	1.70	1.80	-	-					
2555	1.66	2.15	2.66	185					
2846	1.59	2.41	-	-					
3194	1.52	2.70	2.61	184					

31

HORIZON; September 2, 1951; 1535 GCT; 53°59.5'N, 156°30.5'W; sounding, 2900 fm; wind, 200°, force 3; weather, overcast; sea, slight; wire angle, 28°.

531b)	3.42	-	-	-					
894	2.86	-	-	-					
1077	2.58	-	-	-					
1358	2.24	0.73	2.90	183					
1595	2.07	-	-	-					
1841	1.90	1.24	2.71	187					
2090	1.76	-	-	-					
2344	1.72	1.90	2.61	192					
2629	1.64	-	-	-					
2972	1.56	2.37	2.50	188					
					600	3.35			
					700	3.20			
					800	3.03			
					1000	2.68			
					1200	2.42			
					1500	2.09	0.85	2.81	187
					2000	1.80	1.46	2.68	189
					2500	1.71	2.03	2.59	191

a) Overlapping casts.

b) The data obtained on the shallow cast are not included because the depths are too uncertain owing to pretripping of Nansen bottles.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; September 2-3, 1951; 2357, 0136 GCT; 54°15.5'N, 158°02'W; sounding, 1660 fm; wind, 260°, force 3; weather, overcast; sea, moderate; wire angle, 00°, 03°. 32

0	12.25	6.11	0.93	18	0	12.25	6.11	0.93	18
10	12.24	5.87	0.90	17	10	12.24	5.87	0.90	17
25	12.20	5.91	0.93	18	20	12.21	5.87	0.91	18
55	5.30	6.49	1.69	35	30	12.20	6.01	0.96	20
80	3.36	6.15	1.92	42	50	6.50	6.47	1.58	32
109	3.47	4.42	2.30	65	75	3.40	6.26	1.87	41
162	4.05	1.29	2.86	94	100	3.40	5.10	2.18	56
213	3.96	0.57	3.15	111	150	4.02	1.90	2.73	88
318	3.84	0.46	3.14	123	200	3.99	0.66	3.13	108
424	3.64	0.43	3.15	134	250	3.90	0.49	3.15	116
529	3.47	0.42	3.26	144	300	3.86	0.46	3.14	122
634	3.28	0.42	3.14	154	400	3.70	0.43	3.14	132
839	3.00	0.47	3.17	163	500	3.51	0.43	3.24	142
1047	2.68	0.50	3.10	171	600	3.34	0.43	3.18	151
1249	2.42	0.66	3.00	178	700	3.19	0.43	3.16	158
					800	3.05	0.46	3.17	162
591a)	3.34	0.43	-	-	1000	2.74	0.47	3.13	169
980	2.69	0.46	-	-	1200	2.50	0.61	3.03	176
1176	2.46	0.60	-	-	1500	2.16	0.91	2.92	187
1472	2.16	0.89	2.93	187	2000	1.86	1.53	2.79	191
1717	2.01	1.14	-	-	2500	1.77	2.03	2.64	191
1966	1.87	1.47	2.80	191	3000	1.50	2.64	2.57	191
2217	1.71	1.76	-	-					
2470	1.68	2.00	2.65	191					
2736	1.61	2.29	-	-					
3034	1.50	2.68	2.57	191					

HORIZON; September 3, 1951; 1025, 1222 GCT; 53°57'N, 159°48.5'W; sounding, 1900 fm; wind, 270°, force 3; weather, overcast; sea, moderate; wire angle, 12°, 21°. 33

0	11.67	6.02	0.80	13	0	11.67	6.02	0.80	13
10	11.66	5.92	0.78	13	10	11.66	5.92	0.78	13
25	11.02	6.04	0.82	-	20	11.43	6.01	0.78	16
49	4.83	6.30	1.74	34	30	10.00	6.11	0.92	20
73	3.62	6.18	1.87	40	50	4.80	6.30	1.74	34
96	3.59	4.96	2.08	58	75	3.62	6.14	1.88	40
148	4.20	1.85	2.78	85	100	3.61	3.47	2.15	64
194	4.08	1.23	3.03	102	150	4.19	1.81	2.79	87
287	3.88	0.66	3.12	118	200	4.06	1.18	3.05	104
385	3.73	0.55	3.11	127	250	3.95	0.80	3.10	113
479	3.60	0.52	3.14	138	300	3.85	0.64	3.12	119
579	3.40	0.49	3.14	148	400	3.70	0.54	3.12	129
774	3.07	0.51	3.05	160	500	3.55	0.51	3.14	141
969	2.75	0.56	3.06	165	600	3.36	0.48	3.14	149
1172	2.54	0.67	3.08	169	700	3.19	0.50	3.10	155
					800	3.04	0.52	3.03	162
570a)	3.47	-	-	-	1000	2.71	0.58	3.08	165
946	2.80	-	-	-	1200	2.51	0.70	3.07	170
1135	2.56	-	-	-	1500	2.19	0.96	2.97	193
1423	2.22	0.86	3.00	187	2000	1.84	1.56	2.82	207
1661	2.06	-	-	-	2500	1.70	2.05	2.67	206
1904	1.90	1.44	2.85	206	2900	1.60	2.33	2.63	195
2148	1.74	-	-	-					
2392	1.72	1.98	2.68	207					
2650	1.65	-	-	-					
2940	1.59	2.35	2.62	193					

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
36	HORIZON; September 5, 1951; 0007, 0057, 0253 GCT; 51°00'N, 158°34'W; sounding, 2620 fm; wind, 270°, force 4; weather, overcast; sea, rough; wire angle, 20°, 22°, 18°.[a]								
0	11.69	5.92	1.27	26	0	11.69	5.92	1.27	26
9	11.70	5.91	1.28	28	10	11.70	5.91	1.28	28
23	11.66	5.89	1.24	27	20	11.67	5.88	1.24	27
52	6.19	6.37	1.65	29	30	11.64	6.00	1.27	27
75	4.56	6.39	1.71	35	50	6.75	6.36	1.65	29
103	3.86	6.06	1.75	37	75	4.56	6.39	1.71	35
					100	3.87	6.10	1.75	37
151	3.98	3.69	2.31	71	150	3.98	3.73	2.31	66
197	3.88	2.62	2.66	83	200	3.87	2.59	2.68	84
290	3.77	1.55	2.89	105	250	3.80	1.97	2.82	96
388	3.82	0.74	3.05	120	300	3.77	1.46	2.92	107
483	3.64	0.62	3.17	131	400	3.81	0.69	3.10	122
570	3.47	0.52	3.14	142	500	3.61	0.60	3.16	133
769	3.19	0.52	3.05	154	600	3.43	0.52	3.13	145
968	2.87	0.60	3.02	155	700	3.29	0.50	3.08	152
1167	2.62	0.67	3.02	166	800	3.14	0.54	3.04	155
					1000	2.80	0.60	3.02	156
597b)	3.47	0.48	-	-	1200	2.59	0.67	3.02	168
992	2.82	0.56	-	-	1500	2.26	0.77	2.90	178
1194	2.59	0.62	-	-	2000	1.93	1.37	2.83	185
1495	2.26	0.76	2.90	178	2500	1.73	1.90	2.68	187
1750	2.08	1.02	-	-	3000	1.57	2.30	2.64	186
2009	1.93	1.37	2.83	185					
2271	1.77	1.61	-	-					
2541	1.72	1.95	2.67	187					
2838	1.62	2.18	-	-					
3189	1.56	2.43	2.65	185					
37	HORIZON; September 5, 1951; 1112, 1230 GCT; 50°02'N, 158°18'W; sounding, 2650 fm; wind, 265°, force 3; weather, missing; sea, slight; wire angle, 23°, 07°.								
0	12.55	5.84	1.47	31	0	12.55	5.84	1.47	31
9	12.56	5.84	1.44	30	10	12.55	5.84	1.43	30
23	12.55	5.82	1.43	31	20	12.55	5.83	1.43	31
46	5.66	6.67	1.73	31	30	9.50	5.89	1.48	31
68	4.38	6.61	1.83	36	50	5.30	6.67	1.77	31
90	3.80	6.49	1.87	37	75	4.15	6.58	1.85	36
137	3.91	3.32	2.58	75	100	3.77	6.32	2.00	42
178	3.73	2.59	2.79	85	150	3.88	3.01	2.65	79
261	3.76	1.22	3.02	107	200	3.70	2.20	2.88	92
348	3.74	0.86	3.11	121	250	3.73	1.37	3.01	105
434	3.58	0.76	3.18	130	300	3.76	0.99	3.07	115
525	3.42	0.73	3.21	140	400	3.65	0.78	3.16	127
704	3.18	0.63	3.18	159	500	3.46	0.75	3.20	137
888	2.92	0.64	3.15	163	600	3.34	0.67	3.20	149
1086	2.64	0.69	3.11	172	700	3.18	0.63	3.18	159
					800	3.01	0.63	3.17	161
626b)	3.32	0.66	-	-	1000	2.74	0.65	3.13	169
1042	2.68	0.66	-	-	1200	2.53	0.74	3.10	173
1251	2.46	0.73	-	-	1500	2.24	0.83	3.01	178
1565	2.18	0.89	2.98	179	2000	1.93	1.38	2.79	183
1828	2.02	1.20	-	-	2500	1.70	1.83	2.68	181
2091	1.88	1.47	2.76	183	3000	1.60	2.28	2.57	187
2357	1.73	1.71	-	-					
2626	1.69	1.94	2.66	181					
2923	1.61	2.21	-	-					
3273	1.54	2.40	2.57	193					

a) No data obtained at Stations 34 and 35 because of rough sea.
b) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; September 5-6, 1951; 2309, 0118 GCT; 49°01.5'N, 157°58'W; sounding, 2680 fm; wind, 305°, force 2; weather, cloudy; sea, slight; wire angle, 18°, 27°. 38

0	13.10	5.89	1.25	26	0	13.10	5.89	1.25	26
9	13.12	5.72	1.23	25	10	13.11	5.72	1.23	25
23	13.08	5.71	1.22	26	20	13.09	5.71	1.22	25
47	6.22	6.41	1.54	28	30	10.60	5.82	1.26	26
71	5.10	6.31	1.67	32	50	6.00	6.41	1.58	30
94	4.39	6.42	1.67	33	75	4.95	6.32	1.67	33
144	4.13	4.86	2.10	54	100	4.32	6.42	1.69	33
189	3.80	3.33	2.53	77	150	4.10	4.64	2.18	60
276	3.72	2.08	2.79	99	200	3.77	3.08	2.58	81
368	3.74	1.30	3.08	110	250	3.73	2.38	2.74	94
454	3.65	0.90	3.14	126	300	3.71	1.83	2.83	103
549	3.51	0.72	3.13	137	400	3.71	1.09	3.13	114
737	3.24	0.62	3.14	149	500	3.58	0.80	3.14	133
926	2.92	0.60	3.14	160	600	3.45	0.68	3.14	141
1127	2.64	0.64	3.12	172	700	3.30	0.63	3.14	147
					800	3.13	0.60	3.14	153
571a)	3.48	0.63	-	-	1000	2.80	0.63	3.14	165
956	2.86	0.53	-	-	1200	2.64	0.63	3.11	175
1152	2.64	0.58	-	-	1500	2.24	0.72	2.96	178
1446	2.31	0.68	2.97	178	2000	1.93	1.25	2.89	191
1692	2.14	0.87	-	-	2500	1.74	1.79	2.77	185
1944	1.97	1.19	2.90	191	3000	1.60	2.24	2.73	190
2197	1.82	1.47	-	-					
2456	1.76	1.74	2.78	186					
2743	1.66	1.94	-	-					
3073	1.58	2.32	2.72	191					

HORIZON; September 6-7, 1951; 2320, 0100 GCT; 48°08'N, 157°28'W; sounding, 2780 fm; wind, 250°, force 4; weather, cloudy; sea, rough; wire angle, 04°, 08°. 39

0	13.66	5.83	1.21	25	0	13.66	5.83	1.21	25
10	13.65	5.82	1.21	22	10	13.65	5.82	1.21	22
24	13.41	5.84	-	21	20	13.57	5.81	1.24	21
50	8.82	6.36	-	28	30	13.37	5.87	1.30	21
75	6.45	6.50	1.58	24	50	8.82	6.36	1.45	28
99	5.28	6.34	1.63	26	75	6.45	6.50	1.58	24
152	5.01	5.47	1.88	43	100	5.28	6.33	1.64	26
198	4.84	4.04	2.16	61	150	5.01	5.51	1.87	43
292	4.18	2.53	2.67	90	200	4.82	3.96	2.18	62
390	4.00	1.65	2.87	107	250	4.47	3.08	2.48	78
486	3.90	1.09	3.09	119	300	4.14	2.44	2.70	91
585	3.65	0.88	3.10	131	400	3.99	1.59	2.90	108
781	3.30	0.68	3.09	152	500	3.87	1.04	3.10	121
972	2.96	0.56	3.10	169	600	3.61	0.81	3.10	133
1174	2.66	0.59	3.11	178	700	3.41	0.70	3.09	144
					800	3.28	0.67	3.09	154
587a)	3.68	0.82	-	-	1000	2.90	0.60	3.11	171
970	2.98	0.64	-	-	1200	2.67	0.57	3.11	179
1160	2.68	0.56	-	-	1500	2.29	0.67	3.01	189
1455	2.34	0.63	3.03	186	2000	1.96	1.17	2.86	202
1694	2.14	0.75	-	-	2500	1.77	1.72	2.70	202
1941	1.99	1.09	2.88	201	3000	1.60	2.33	2.53	195
2191	1.83	1.39	-	-					
2442	1.78	1.66	2.72	202					
2704	1.69	1.97	-	-					
3001	1.60	2.35	2.53	195					

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
40	HORIZON; September 7, 1951; 0931, 1126 GCT; 47°06'N, 157°16'W; sounding, 2770 fm; wind, 180°, force 4; weather, overcast; sea, slight; wire angle, 26°, 14°.								
0	14.11	5.50	1.00	16	0	14.11	5.50	1.00	16
9	14.12	5.65	1.02	16	10	14.13	5.64	1.02	16
22	14.10	5.54	1.00	16	20	14.11	5.55	1.00	16
49	8.30	6.11	1.29	18	30	14.01	5.58	1.02	16
72	6.50	6.34	1.46	21	50	8.30	6.16	1.30	18
98	5.22	6.12	1.51	25	75	6.43	6.34	1.47	21
143	4.91	5.76	1.72	36	100	5.19	6.08	1.52	25
189	4.92	4.27	2.05	56	150	4.90	5.57	1.76	39
280	4.31	2.60	2.52	81	200	4.91	4.00	2.12	60
377	4.06	1.68	2.79	100	250	4.59	3.05	2.40	74
473	3.94	1.18	3.01	115	300	4.22	2.35	2.59	85
567	3.65	0.82	3.02	126	400	4.02	1.53	2.85	104
758	3.31	0.66	3.07	148	500	3.88	1.07	3.02	118
957	2.96	0.57	3.00	160	600	3.59	0.74	3.03	131
1156	2.69	0.57	3.06	171	700	3.43	0.66	3.06	143
					800	3.21	0.63	3.06	151
615a)	3.58	0.72	-	-	1000	2.88	0.56	3.00	163
1022	2.84	0.56	-	-	1200	2.62	0.57	3.06	173
1226	2.58	0.57	-	-	1500	2.29	0.75	3.02	185
1536	2.24	0.78	3.01	185	2000	1.96	1.21	2.92	192
1794	2.08	0.97	-	-	2500	1.72	1.83	2.79	192
2055	1.92	1.28	2.91	192	3000	1.61	2.34	2.69	195
2316	1.77	1.62	-	-					
2581	1.71	1.92	2.77	192					
2875	1.63	2.24	-	-					
3222	1.55	2.51	2.67	204					
41	HORIZON; September 7, 1951; 2226 GCT; 45°59'N, 157°01'W; sounding, 2850 fm; wind, 005°, force 6; weather, cloudy; sea, moderate; wire angle, 22°.								
0	15.09	5.31			0	15.09	5.31		
10	15.08	5.28			10	15.08	5.28		
23	15.07	5.38			20	15.07	5.33		
52	8.07	6.06			30	13.60	5.51		
74	6.74	5.83			50	8.50	6.06		
103	6.60	5.76			75	6.75	5.84		
151	7.43	5.42			100	6.59	5.77		
200b)	6.34	4.40			150	6.42	5.43		
					200	6.34	4.40		

a) Overlapping casts.
b) No data obtained below this depth because of trouble with hydrographic wire; sea too rough for additional casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
HORIZON; September 8, 1951; 1732, 1906 GCT; 44°08'N, 156°11.5'W; sounding, 2940 fm; wind, 330°, force 6; weather, cloudy; sea, very rough; wire angle, 22°, 21°.[a]									43
0	14.28	6.53	0.76	0	0	14.28	6.53	0.76	0
9	14.28	5.38	0.69	4	10	14.27	5.39	0.69	4
23	14.29	5.68	0.71	0	20	14.28	5.59	0.70	0
51	8.69	6.20	1.22	4	30	12.60	5.83	0.77	0
73	8.38	6.14	1.30	11	50	8.75	6.18	1.21	4
100	7.71	5.90	1.34	18	75	8.34	6.13	1.30	12
144	8.72	5.53	1.35	25	100	7.71	5.90	1.34	18
190	7.98	4.84	1.60	35	150	8.22	5.47	1.37	26
281	6.05	3.85	2.10	56	200	7.86	4.72	1.65	38
380	5.08	2.86	2.52	77	250	6.70	4.17	1.93	49
475	4.52	1.93	2.89	97	300	5.79	3.67	2.18	60
573	4.07	1.25	3.09	114	400	4.96	2.65	2.60	82
769	3.50	0.67	3.22	143	500	4.39	1.73	2.96	102
976	3.08	0.52	3.28	164	600	3.97	1.08	3.12	118
1181	2.73	0.37	3.29	174	700	3.66	0.77	3.20	133
					800	3.43	0.62	3.24	147
581b)	4.08	1.17	-	-	1000	3.03	0.49	3.28	165
959	3.18	3.07	-	-	1200	2.70	0.42	3.28	175
1151	2.80	0.42	-	-	1500	2.33	0.53	3.17	189
1436	2.40	0.47	3.20	186	2000	1.91	1.14	3.07	198
1679	2.20	0.71	-	-	2500	1.73	1.75	2.97	199
1924	1.97	1.07	3.08	197	3000	1.57	2.31	2.79	194
2174	1.82	1.28	-	-					
2429	1.76	1.69	2.99	199					
2718	1.64	1.94	-	-					
3063	1.56	2.40	2.76	192					
HORIZON; September 9, 1951; 0410, 0455, 0423 GCT; 43°13.5'N, 155°55.5'W; sounding, 2840 fm; wind, 290°, force 3; weather, overcast; sea, moderate; wire angle, 12°, 26°, 20°.									44
0	14.48	5.79	0.53	0	0	14.48	5.79	0.53	0
					10	14.45	5.76	0.56	0
9	14.44	5.77	0.55	0	20	14.36	5.73	0.53	0
23	14.35	5.73	0.53	0	30	14.32	5.76	0.53	0
52	10.60	5.93	0.84	2	50	10.89	5.91	0.82	2
74	8.71	6.04	0.96	14	75	8.65	6.04	0.95	14
103	8.19	5.80	1.07	22	100	8.20	5.85	1.06	22
					150	8.49	5.11	1.21	22
143	8.50	5.20	1.18	21	200	8.03	4.70	1.38	32
188	8.16	4.71	1.36	31	250	7.50	4.82	1.40	32
283	7.10	4.86	1.44	32	300	6.81	4.68	1.60	34
380	5.24	2.93	2.33	71	400	5.10	2.73	2.43	76
475	4.64	2.04	2.71	91	500	4.50	1.83	2.77	96
567	4.20	1.33	2.86	109	600	4.09	1.18	2.89	115
757	3.71	0.75	2.96	135	700	3.83	0.87	2.94	128
968	3.18	0.42	3.01	155	800	3.60	0.66	2.97	139
1153c)	2.83	0.40	2.98	171	1000	3.11	0.42	3.00	158

a) No data obtained at Station 42 because of rough sea.
b) Overlapping casts.
c) Deep cast not possible because of rough sea.

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HORIZON; September 9, 1951; 1209, 1356 GCT; 42°15.5'N, 155°37.5'W; sounding, 2860 fm; wind, 235°, force 3; weather, missing; sea, slight; wire angle, 20°, 22°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	15.30	5.69	0.52	0	0	15.30	5.69	0.52	0
9	15.28	6.17	0.52	0	10	15.28	6.17	0.52	0
24	15.19	5.75	0.52	0	20	15.22	5.80	0.52	0
46	13.50	5.84	0.61	0	30	15.17	5.76	0.53	0
68	9.66	5.96	0.99	-	50	12.98	5.87	0.76	0
87	8.84	5.95	1.05	11	75	9.15	5.95	1.03	8
130	8.44	5.92	1.12	16	100	8.62	5.94	1.07	13
169	8.72	5.29	1.20	20	150	8.62	5.66	1.15	18
249	7.51	4.42	1.65	37	200	8.41	4.91	1.35	26
333	6.00	3.66	2.12	56	250	7.49	4.42	1.65	38
415	5.19	2.87	2.44	73	300	6.57	3.94	1.95	49
504	4.60	1.95	2.70	93	400	5.31	3.08	2.38	70
680	3.94	1.05	2.97	126	500	4.61	1.98	2.69	92
864	3.38	0.55	3.14	147	600	4.18	1.46	2.87	113
1063	3.00	0.40	3.23	163	700	3.86	0.97	2.99	129
					800	3.50	0.63	3.09	141
589a)	4.36	1.52	-	-	1000	3.13	0.46	3.25	158
983	3.16	0.49	-	-	1200	2.78	0.37		
1181	2.80	0.37	-	-	1450	2.50	0.43		
1477b)	2.38	0.45	-	-					

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HORIZON; September 9-10, 1951; 2213, 2248, 0043 GCT; 41°19.5'N, 155°21'W; sounding, 2880 fm; wind, 195°, force 3; weather, cloudy; sea, slight; wire angle, 25°, missing, 45°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	16.90	5.37	0.41	0	0	16.90	5.37	0.41	0
8	16.82	5.49	0.41	0	10	16.81	5.48	0.41	0
22	16.80	5.36	0.39	0	20	16.80	5.38	0.39	0
49	11.40	5.81	0.70	5	30	16.80	5.37	0.41	1
72	10.60	5.71	0.82	9	50	11.35	5.82	0.72	5
98	9.68	5.77	0.86	13	75	10.52	5.73	0.83	10
					100	9.66	5.74	0.86	13
129	9.52	5.53	0.94	15	150	9.43	5.36	1.04	16
171	9.30	5.18	1.16	-	200	9.07	4.97	1.29	22
258	8.40	4.54	1.53	32	250	8.50	4.60	1.50	31
348	6.92	3.90	1.86	49	300	7.77	4.24	1.68	40
436	5.54	3.13	2.34	65	400	6.07	3.50	2.14	58
526	4.75	1.98	2.73	91	500	4.94	2.32	2.64	84
709	3.93	0.90	3.05	123	600	4.39	1.38	2.91	107
900	3.38	0.48	3.15	145	700	3.97	0.93	3.04	122
1095	3.00	0.35	3.23	165	800	3.70	0.64	3.11	134
					1000	3.17	0.40	3.20	156
482a)	5.26	2.58	-	-	1200	2.81	0.31	3.22	172
826	3.64	0.59	-	-	1500	2.39	0.42	3.12	187
1006	3.16	0.33	-	-	2000	1.89	1.13	3.11	197
1287	2.65	0.28	3.19	176	2500	1.73	1.71	3.04	199
1529	2.34	0.45	-	-	2900	1.58	2.16	2.87	194
1777	2.09	0.81	3.09	194					
2030	1.88	1.17	-	-					
2288	1.81	1.47	3.11	199					
2575	1.68	1.80	-	-					
2921	1.58	2.18	2.86	193					

a) Overlapping casts.
b) No data obtained below this depth because of wire trouble.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
HORIZON; September 11, 1951; 0230, 0502 GCT; 40°08'N, 155°01'W; sounding, 2760 fm; wind, 090°, force 3; weather, overcast; sea, moderate; wire angle, 08°, 45°.									47
0	18.94	5.32	0.43	4	0	18.94	5.32	0.43	4
10	18.92	5.38	0.41	3	10	18.92	5.38	0.41	3
25	18.45	5.48	0.43	11	20	18.90	5.44	0.42	10
50	12.56	6.37	0.54	6	30	16.05	5.58	0.44	11
74	11.28	5.64	0.83	9	50	12.56	6.37	0.54	6
99	10.12	5.69	0.92	13	75	11.23	5.64	0.83	10
149	9.88	5.67	1.01	15	100	10.11	5.68	0.93	13
195	10.02	5.10	1.20	26	150	9.88	5.66	1.02	16
283	8.61	4.52	1.57	37	200	10.00	5.05	1.22	26
378	6.94	4.02	1.97	47	250	9.15	4.70	1.43	33
469	5.60	3.20	2.47	70	300	8.37	4.42	1.63	39
565	4.78	2.15	2.85	94	400	6.55	3.88	2.09	52
756	3.90	0.93	3.18	138	500	5.28	2.83	2.61	78
947	3.31	0.44	3.36	154	600	4.56	1.88	2.93	104
1147	2.90	0.33	3.34	171	700	4.11	1.26	3.11	129
					800	3.73	0.72	3.24	143
457a)	5.63	3.00	-	-	1000	3.19	0.39	3.37	158
783	3.79	0.79	-	-	1200	2.79	0.38	3.27	176
956	3.32	0.41	-	-	1500	2.42	0.50	3.17	194
1223	2.74	0.41	3.24	179	2000	1.93	1.10	3.03	202
1452	2.44	0.40	-	-					
1698	2.17	0.80	3.15	197					
1943	1.95	0.98	-	-					
2197	1.85	1.47	2.96	205					
HORIZON; September 11, 1951; 2110, 2312 GCT; 39°21'N, 154°40.5'W; sounding, 2650 fm; wind, 140°, force 3; weather, cloudy; sea, slight; wire angle, 18°, 16°.									48
0	20.43	4.74	0.40	-	0	20.43	4.74	0.40	3
9	20.42	4.79	0.38	-	10	20.41	4.78	0.38	2
23	20.37	4.76	0.41	-	20	20.38	4.75	0.40	2
47	14.52	5.69	0.42	-	30	20.35	4.84	0.42	2
71	12.48	5.84	0.56	-	50	14.28	5.75	0.43	3
94	11.34	5.23	0.74	-	75	12.85	5.84	0.60	5
143	10.21	5.16	0.97	-	100	11.14	5.22	0.77	8
187	10.30	4.85	1.20	-	150	10.21	5.12	1.00	11
273	9.26	4.33	1.49	-	200	10.22	4.73	1.25	19
364	7.62	3.97	1.85	-	250	9.62	4.45	1.42	22
451	6.41	3.54	2.17	-	300	8.77	4.23	1.60	30
544	5.31	2.58	2.68	-	400	7.11	3.79	1.99	45
730	4.15	1.11	3.16	-	500	5.81	3.13	2.43	65
915	3.48	0.48	3.38	-	600	4.73	1.87	2.88	90
1115	3.06	0.65	3.35	-	700	4.27	1.25	3.11	110
					800	3.91	0.83	3.28	128
603a)	4.72	1.83	-	-	1000	3.28	0.36	3.38	152
1007	3.26	0.36	-	-	1200	2.90	0.27	3.34	168
1207	2.89	0.27	-	-	1500	2.44	0.45	3.25	188
1514	2.43	0.47	3.25	189	2000	1.96	1.21	3.11	203
1770	2.16	0.87	-	-	2500	1.70	1.95	2.99	204
2028	1.93	1.23	3.10	203	3000	1.53	2.52	2.90	195
2293	1.76	1.58	-	-					
2557	1.68	2.02	2.98	203					
2848	1.58	2.37	-	-					
3194	1.52	2.70	2.87	190					

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
49	HORIZON; September 12, 1951; 0826, 1017 GCT; 38°30'N, 154°25'W; sounding, 2850 fm; wind, 155°, force 3; weather, partly cloudy; sea, slight; wire angle, 24°, 25°.								
0	20.91	4.97	0.38	2	0	20.91	4.97	0.38	2
10	20.88	4.88	0.36	3	10	20.87	4.88	0.36	3
23	20.43	5.04	0.35	3	20	20.83	4.97	0.35	3
45	14.35	6.36	0.41	0	30	17.75	5.92	0.35	4
67	12.41	5.88	0.60	7	50	13.80	6.32	0.43	5
89	11.34	5.40	0.81	8	75	12.00	5.60	0.71	7
134	10.30	5.60	0.90	13	100	10.92	5.40	0.84	9
174	10.20	5.08	1.11	20	150	10.25	5.44	0.98	16
253	9.46	4.60	1.44	27	200	10.06	4.89	1.22	23
339	7.97	4.25	1.75	35	250	9.51	4.62	1.42	27
420	6.61	3.76	2.17	52	300	8.71	4.40	1.60	31
506	5.48	2.40	2.63	74	400	6.93	3.93	2.06	47
679	4.26	1.28	3.21	114	500	5.56	2.47	2.60	73
853	3.63	0.60	3.38	138	600	4.64	1.81	2.99	98
1044	3.14	0.33	3.50	158	700	4.17	1.17	3.24	118
					800	3.81	0.73	3.34	132
580a)	4.78	1.97	-	-	1000	3.27	0.40	3.48	154
967	3.34	0.45	-	-	1200	2.89	0.27	3.49	171
1163	2.93	0.26	-	-	1500	2.43	0.59	3.37	190
1458	2.50	0.50	3.39	187	2000	1.95	1.35	3.19	200
1706	2.23	0.88	-	-	2500	1.71	2.09	3.01	201
1956	1.99	1.30	3.21	200	3000	1.55	2.62	2.92	192
2213	1.79	1.59	-	-					
2470	1.71	2.04	3.02	201					
2757	1.61	2.40	-	-					
3098	1.54	2.70	2.91	189					
50	HORIZON; September 12-13, 1951; 2235, 0020 GCT; 37°28'N, 154°18'W; sounding, 3000+ fm; wind, 220°, force 3; weather, overcast; sea, slight; wire angle, 12°, 10°.								
0	22.12	4.73	0.30	4	0	22.12	4.73	0.30	4
10	22.09	4.64	0.30	5	10	22.09	4.64	0.30	5
25	21.91	4.56	0.29	5	20	22.00	4.58	0.29	5
54	14.22	5.51	0.38	4	30	20.07	4.57	0.30	5
78	13.14	4.86	0.52	9	50	14.92	5.45	0.36	4
106	12.06	5.01	0.71	9	75	13.27	4.87	0.50	8
156	11.14	4.80	0.88	12	100	12.20	4.97	0.68	9
206	10.82	4.44	1.14	20	150	11.24	4.84	0.86	11
307	9.44	4.23	1.45	28	200	10.86	4.49	1.10	19
414	7.31	3.93	1.83	42	250	10.30	4.33	1.29	23
515	5.71	2.91	2.40	70	300	9.56	4.26	1.43	27
617	4.71	1.93	2.79	96	400	7.57	4.03	1.77	40
815	3.80	0.67	3.20	134	500	5.95	3.09	2.32	66
1019	3.22	0.32	3.32	156	600	4.93	2.08	2.74	92
1221	2.82	0.29	3.28	173	700	4.33	1.27	3.00	114
					800	3.87	0.74	3.18	131
621a)	4.83	1.97	-	-	1000	3.28	0.33	3.32	155
1033	3.18	0.33	-	-	1200	2.85	0.29	3.29	172
1237	2.83	0.30	-	-	1500	2.49	0.51	3.09	181
1546	2.40	0.55	3.08	182	2000	1.96	1.28	3.04	197
1806	2.13	0.97	-	-	2500	1.68	1.89	2.86	190
2064	1.91	1.39	3.02	197	3000	1.56	2.45	2.78	188
2587	1.62	2.00	2.84	189	4000	1.50	3.01	2.54	181
3211	1.54	2.63	2.73	187					
3798	1.50	2.93	2.60	181					
4293	1.50	3.07	2.52	181					

a) Overlapping casts.

OBSERVED					INTERPOLATE				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
HORIZON; September 13, 1951; 2202 GCT; 36°11'N, 153°49'W; sounding, 3000 fm; wind, 320°, force 6; weather, overcast; sea, very rough; wire angle, 35°.									51
0	22.40	4.78	0.32	5	0	22.40	4.78	0.32	5
8	22.41	4.81	0.32	5	10	22.42	4.81	0.32	5
25	22.39	4.77	0.30	6	20	22.40	4.79	0.30	5
48	15.97	5.95	0.35	8	30	20.05	4.79	0.31	6
70	13.72	5.75	0.41	10	50	15.62	5.94	0.35	8
91	12.38	5.26	0.64	8	75	13.30	5.57	0.46	10
133	11.38	5.38	0.83	10	100	12.08	5.24	0.69	9
175	10.58	5.16	1.03	13	150	11.07	5.33	0.91	11
259	9.84	4.70	1.35	23	200	10.33	4.99	1.13	15
340	8.49	4.35	1.62	33	250	9.92	4.73	1.31	21
426	6.88	3.97	1.91	48	300	9.24	4.52	1.49	28
512a)	5.70	3.14	2.33	67	400	7.35	4.09	1.82	43
					500	5.86	3.32	2.26	64
HORIZON; September 14, 1951; 0951 GCT; 34°58'N, 153°28'W; sounding, 3000+ fm; wind, 350°, force 4; weather, overcast; sea, rough; wire angle, 22°.									52
0	22.89	4.74	0.20	3	0	22.89	4.74	0.20	3
9	22.90	4.69	0.21	6	10	22.90	4.70	0.21	5
22	20.53	5.23	0.21	4	20	21.60	5.12	0.21	4
51	15.51	5.59	0.27	4	30	18.53	5.43	0.22	3
74	14.04	5.31	0.35	7	50	15.70	5.58	0.27	4
100	13.01	5.13	0.57	11	75	14.05	5.30	0.35	7
148	12.13	5.01	0.75	12	100	13.01	5.13	0.57	11
196	11.42	4.69	0.99	20	150	12.10	5.00	0.75	12
292	9.94	4.55	1.36	24	200	11.37	4.68	1.01	20
394	8.25	4.31	1.69	35	250	10.60	4.62	1.21	22
492	6.51	3.67	2.20	51	300	9.82	4.54	1.38	24
591	5.19	2.39	2.80	82	400	8.15	4.28	1.71	36
787	3.96	0.75	3.35	126	500	6.40	3.59	2.25	53
993	3.32	0.31	3.49	151	600	5.10	2.26	2.84	84
1195b)	2.92	0.29	3.51	168	700	4.41	1.25	3.18	109
					800	3.90	0.70	3.37	128
					1000	3.31	0.30	3.50	152
					1200	(2.92)	(0.29)	(3.51)	(169)

a) Deep cast not possible because of rough sea.
b) Deep cast not obtained.

53

HORIZON; September 14, 1951; 2036, 2230 GCT; 33°28.5'N, 153°02'W; sounding, 3000+ fm; wind, 325°, force 3; weather, cloudy; sea, slight; wire angle, 15°, 27°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	23.84	4.69	0.18	0	0	23.84	4.69	0.18	0
9	23.84	4.73	0.19	2	10	23.85	4.73	0.19	2
23	23.85	4.70	0.17	2	20	23.85	4.71	0.17	2
48	19.57	5.57	0.22	3	30	23.85	4.77	0.16	2
71	17.50	5.63	0.24	3	50	19.04	5.60	0.23	3
95	16.10	5.51	0.27	4	75	17.21	5.63	0.24	3
145	13.64	5.06	0.57	5	100	15.89	5.47	0.29	4
190	12.23	4.82	0.89	14	150	13.46	4.99	0.60	6
280	10.55	4.72	1.32	18	200	12.04	4.80	0.96	15
374	8.87	4.58	1.61	26	250	11.09	4.74	1.20	17
464	7.32	3.94	2.10	42	300	10.20	4.71	1.38	19
559	5.70	2.80	2.75	70	400	8.40	4.46	1.73	30
749	4.23	1.03	3.29	118	500	6.65	3.49	2.36	52
937	3.59	0.43	3.55	145	600	5.26	2.32	2.90	83
1138	3.20	0.37	3.49	161	700	4.51	1.33	3.17	108
					800	4.00	0.80	3.41	127
583a)	6.02	2.99	-	-	1000	3.47	0.39	3.52	151
956	3.57	0.40	-	-	1200	3.11	0.38	3.50	165
1178	3.13	0.38	-	-	1500	2.60	0.88	3.44	181
1480	2.62	0.82	3.46	180	2000	2.01	1.60	3.08	202
1736	2.20	1.19	-	-	2500	1.69	2.13	2.98	200
1996	2.02	1.59	3.08	202	3000	1.54	2.63	2.91	196
2259	1.75	1.91	-	-					
2524	1.70	2.14	2.98	200					
2819	1.60	2.47	-	-					
3168	1.52	2.74	2.92	195					

54

HORIZON; September 15, 1951; 0926, 1107 GCT; 32°01'N, 152°27'W; sounding, 2860 fm; wind, 270°, force 3; weather, cloudy; sea, slight; wire angle, 03°, 17°.

0	24.30	4.30	0.12	5	0	24.30	4.30	0.12	5
10	24.31	4.16	0.11	5	10	24.31	4.16	0.11	5
25	24.34	4.37	0.10	6	20	24.33	4.30	0.10	6
55	18.10	4.68	0.19	2	30	24.35	4.44	0.11	5
79	16.32	5.34	0.24	2	50	18.75	4.64	0.18	3
109	14.84	4.94	0.27	3	75	16.65	5.30	0.24	2
161	13.02	4.64	0.66	8	100	15.22	5.05	0.26	3
212	12.18	4.24	0.86	14	150	13.33	4.68	0.55	7
316	10.21	4.25	1.24	21	200	12.36	4.29	0.83	12
424	8.21	3.97	1.61	34	250	11.58	4.26	0.99	16
527	6.30	3.09	2.26	59	300	10.57	4.26	1.18	20
630	4.92	1.89	2.75	89	400	8.62	4.13	1.54	30
834	3.83	0.59	3.17	129	500	6.80	3.30	2.04	48
1038	3.36	0.31	3.29	154	600	5.26	2.17	2.67	82
1243	2.98	0.55	3.20	166	700	4.41	1.39	2.91	107
					800	3.97	0.77	3.11	125
560a)	5.78	2.64	-	-	1000	3.41	0.32	3.29	149
931	3.56	0.31	-	-	1200	3.02	0.48	3.23	164
1116	3.18	0.36	-	-	1500	2.50	0.91	3.07	178
1401	2.69	0.75	3.11	173	2000	1.97	1.65	2.95	193
1635	2.32	1.09	-	-	2500	1.73	2.06	2.84	196
1876	2.09	1.48	2.98	189	2900	1.56	2.43	2.76	194
2121	1.84	1.77	-	-					
2365	1.76	1.97	2.87	197					
2627	1.64	2.19	-	-					
2922	1.56	2.45	2.76	194					

a) Overlapping casts.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; September 16, 1951; 1217, 1347 GCT; 30°07'N, 152°05'W; sounding, 2800 fm; wind, 200°, force 3; weather, cloudy; sea, slight; wire angle, 06°, missing. 55

0	24.51	4.65	0.15	0	0	24.51	4.65	0.15	0
10	24.53	4.64	0.15	0	10	24.53	4.64	0.15	0
25	24.56	4.62	0.15	0	20	24.56	4.62	0.15	0
55	21.40	5.30	0.16	2	30	24.56	4.69	0.15	0
80	19.76	5.11	0.18	0	50	23.05	5.28	0.16	1
109	18.40	4.96	0.21	0	75	20.02	5.16	0.18	0
161	-	4.73	0.41	2	100	18.80	4.99	0.20	0
213	13.30	4.62	0.79	10	150	16.30	4.80	0.34	2
314	10.92	4.57	1.17	17	200	13.90	4.64	0.66	8
422	8.54	4.42	1.59	31	250	12.28	4.62	0.96	14
526	6.76	3.32	2.18	52	300	11.21	4.58	1.12	16
629	5.36	2.05	3.24	83	400	9.06	4.46	1.49	27
832	4.18	0.62	3.28	121	500	7.16	3.75	1.99	46
1040	3.56	0.48	3.40	148	600	5.70	2.22	3.15	74
1242	3.10	0.80	3.36	160	700	4.87	1.55	3.28	100
					800	4.32	0.75	3.28	118
583a)	5.92	2.35	-	-	1000	3.66	0.42	3.39	143
965	3.74	0.41	-	-	1200	3.19	0.73	3.38	158
1156	3.30	0.62	-	-	1500	2.65	1.25	3.18	173
1446	2.70	1.14	3.23	169	2000	1.91	1.79	3.06	193
1687	2.37	1.49	-	-	2500	1.71	2.17	2.90	(194)
1932	1.98	1.81	3.07	192	3000	(1.54)	(2.62)	(2.85)	
2181	1.85	1.97	-	-					
2431	1.76	2.09	2.93	194					
2695	1.65	2.36	-	-					
2993	1.54	2.63	2.85	-					

HORIZON; September 17, 1951; 0407, 0550, missing GCT; 28°06'N, 151°25'W; sounding, 2890 fm; wind, 140°, force 2; weather, partly cloudy; sea, moderate; wire angle, 05°, 05°, missing. 56

0	25.26	3.99	0.17	0	0	25.26	3.99	0.17	0
10	25.04	4.25	0.15	0	10	25.04	4.25	0.15	0
25	24.86	4.07	0.14	0	20	24.92	4.13	0.14	0
50	24.16	4.49	0.15	0	30	24.82	4.08	0.14	0
74	22.04	4.51	0.19	0	50	24.16	4.49	0.15	0
98	-	4.50	0.18	0	75	22.05	4.53	0.20	0
149	-	4.35	0.27	0	100	20.25	4.52	0.18	0
197	-	4.49	0.35	5	150	17.60	4.33	0.27	0
289	12.30	4.15	0.98	12	200	15.30	4.50	0.36	5
386	9.82	4.35	1.34	20	250	13.54	4.31	0.57	8
480	7.89	3.39	1.92	38	300	11.98	4.15	1.04	13
579	6.02	1.99	2.68	70	400	9.46	4.32	1.41	21
772	4.52	0.60	3.22	112	500	7.60	3.02	2.11	45
965	3.83	0.48	3.29	137	600	5.79	1.78	2.80	76
1168	3.32	0.82	3.24	150	700	4.82	0.97	3.12	98
					800	4.45	0.52	3.25	117
625a)	5.54	1.63	-	-	1000	3.71	0.51	3.28	139
1040	3.60	0.59	-	-	1200	3.25	0.87	3.23	151
					1500	2.69	1.38	3.17	160
145a)	-	4.44	-	-	2000	2.07	1.72	3.07	186
454	8.19	3.71	-	-	2500	1.73	2.15	2.95	186
714	4.72	0.86	-	-	3000	1.56	2.59	2.84	186
973	3.78	0.48	-	-					
1495	2.70	1.39	3.17	160					
2116	1.98	1.79	3.05	188					
2702	1.64	2.35	2.88	185					
3200	1.51	2.78	2.82	187					

a) Overlapping casts.

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HORIZON; September 17, 1951; 2255 GCT; 29°03.5'N, 149°17'W; sounding, 2880 fm; wind, 090°, force 3; weather, partly cloudy; sea, smooth; wire angle, 11°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	24.68	4.72	0.17	0	0	24.68	4.72	0.17	0
10	24.61	4.68	0.16	0	10	24.61	4.68	0.16	0
24	24.46	4.65	0.13	1	20	24.51	4.66	0.13	1
53	23.31	4.96	0.17	0	30	24.39	4.70	0.13	1
77	20.10	5.32	0.19	0	50	23.69	4.93	0.16	0
106	18.55	5.13	0.23	2	75	20.20	5.33	0.19	0
157	-	4.79	0.41	3	100	18.79	5.18	0.23	1
207	13.92	4.60	0.77	8	150	16.41	4.83	0.36	3
309	11.05	4.57	1.19	17	200	14.22	4.62	0.72	7
415	8.72	4.31	1.64	29	250	12.51	4.58	0.95	12
517	6.78	3.24	2.25	53	300	11.27	4.56	1.16	16
619	5.16	1.94	2.89	84	400	9.04	4.41	1.58	27
821	4.15	0.53	3.36	123	500	7.08	3.47	2.11	48
1027	3.57	0.56	3.40	148	600	5.40	2.18	2.80	79
1229a)	3.15	0.84	3.28	157	700	4.61	1.16	3.17	101
					800	4.21	0.59	3.34	119
					1000	3.64	0.54	3.40	146
					1200	3.28	0.81	3.29	156

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HORIZON; September 18, 1951; 1625 GCT; 29°44.5'N, 147°03.5'W; sounding, 2690 fm; wind, 120°, force 4; weather, partly cloudy; sea, moderate; wire angle, 23°.

0	24.48	4.46	0.12	0	0	24.48	4.46	0.12	0
8	24.50	4.50	0.13	0	10	24.49	4.50	0.13	0
22	24.46	4.49	0.11	0	20	24.47	4.50	0.11	0
50	23.50	4.67	0.13	0	30	24.45	4.51	0.11	0
73	19.38	5.13	0.19	2	50	23.50	4.67	0.13	0
100	18.53	5.11	0.16	2	75	19.35	5.13	0.19	2
147	-	4.84	0.29	2	100	18.53	5.11	0.16	2
195	13.96	4.54	0.53	10	150	16.44	4.81	0.31	3
289	10.90	4.44	1.20	17	200	13.70	4.54	0.56	11
388	8.52	3.96	1.69	32	250	12.00	4.49	0.92	14
484	6.81	3.25	2.21	52	300	10.61	4.40	1.26	18
580	5.38	2.07	2.74	79	400	8.27	3.88	1.76	35
775	4.35	0.52	3.22	117	500	6.53	3.05	2.30	56
975	3.68	0.41	3.21	142	600	5.24	1.83	2.83	84
1172	3.18	0.77	3.22	153	700	4.68	0.92	3.14	105
					800	4.27	0.49	3.22	121
					1000	3.59	0.44	3.21	144
					1200	(3.14)	(0.80)	(3.23)	(154)

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HORIZON; September 19, 1951; 0524, 0555 GCT; 30°25'N, 145°08'W; sounding, 2750 fm; wind, 030°, force 3; weather, clear; sea, moderate; wire angle, 25°, missing.

0	24.29	4.47	0.17	0	0	24.29	4.47	0.17	0
9	24.29	4.62	0.20	4	10	24.30	4.63	0.20	4
22	23.97	4.66	0.15	0	20	24.05	4.65	0.16	0
49	22.40	4.94	0.18	0	30	23.65	4.70	0.15	0
71	20.16	5.23	0.19	3	50	22.37	4.99	0.18	1
96	18.81	5.19	0.21	2	75	19.85	5.24	0.19	3
141	-	4.91	0.30	4	100	18.55	5.14	0.22	2
186	-	4.82	0.49	11	150	16.20	4.88	0.33	6
277	11.14	4.64	1.07	18	200	13.72	4.80	0.56	13
373	8.81	4.45	1.51	29	250	11.89	4.69	0.92	16
464	7.22	3.62	1.94	49	300	10.45	4.59	1.19	20
556	5.82	2.44	2.52	71	400	8.29	4.33	1.62	34
740	4.64	0.74	3.06	108	500	6.62	3.09	2.18	58
937	3.94	0.46	3.29	137	600	5.45	1.97	2.69	81
					700	4.86	1.03	2.97	101
1137	3.42	0.64	3.27	152	800	4.39	0.53	3.16	119
					1000	3.77	0.49	3.30	142
					1100	3.53	0.60	3.29	150

a) No data obtained below this depth because of trouble with hydrographic wire. No deep casts possible on remaining stations of cruise on account of poor condition of wire.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L

HORIZON; September 20, 1951; 0008 GCT; 31°19'N, 143°02'W; sounding, 2720 fm; wind, 035°, force 3; weather, cloudy; sea, slight; wire angle, 14°. 60

0	23.99	4.61	0.16	0	0	23.99	4.61	0.16	0
10	23.98	4.61	0.16	1	10	23.98	4.61	0.16	1
24	23.97	4.60	0.14	0	20	23.96	4.60	0.14	1
53	23.14	4.84	0.14	0	30	23.95	4.62	0.13	0
77	19.80	5.26	0.17	1	50	23.92	4.80	0.13	0
106	18.47	4.99	0.19	1	75	19.95	5.26	0.17	1
156	-	4.81	0.35	2	100	18.70	5.07	0.19	1
206	13.35	4.74	0.68	7	150	16.26	4.82	0.32	2
305	10.33	4.63	1.30	18	200	13.60	4.75	0.64	6
412	8.20	4.09	1.77	32	250	11.85	4.72	0.99	11
514	6.27	2.82	2.48	60	300	10.45	4.64	1.27	17
615	4.87	1.73	2.93	92	400	8.43	4.21	1.71	30
816	3.88	0.46	3.36	132	500	6.52	3.03	2.36	55
1022	3.43	0.35	3.44	151	600	5.05	1.89	2.87	87
1222	3.10	0.68	3.35	162	700	4.30	1.03	3.14	124
					800	3.93	0.49	3.34	131
					1000	3.48	0.34	3.44	149
					1200	3.15	0.63	3.36	161

HORIZON; September 20, 1951; 1327 GCT; 32°01.5'N, 140°57'W; sounding, 2880 fm; wind, 355°, force 3; weather, cloudy; sea, slight; wire angle, 15°. 61

0	23.12	4.83	0.19	0	0	23.12	4.83	0.19	0
9	23.15	4.81	0.16	2	10	23.15	4.82	0.16	2
23	23.02	4.80	0.17	2	20	23.05	4.79	0.16	2
53	19.80	5.36	0.23	0	30	22.65	4.85	0.18	2
76	17.96	5.09	0.26	0	50	20.30	5.34	0.22	0
105	17.45	5.20	0.22	0	75	17.95	5.10	0.26	0
153	-	5.06	0.31	3	100	17.54	5.19	0.22	1
202	12.79	4.79	0.74	7	150	15.89	5.08	0.29	3
299	10.05	4.70	1.27	20	200	12.86	4.80	0.73	7
399	7.86	4.26	1.73	33	250	11.22	4.69	1.03	14
498	6.28	2.89	2.38	59	300	10.04	4.70	1.28	21
596	5.08	1.62	2.86	89	400	7.86	4.25	1.74	34
795	4.06	0.51	3.30	128	500	6.22	2.83	2.39	60
996	3.52	0.39	3.25	151	600	5.05	1.58	2.88	90
1197	3.10	0.63	3.24	162	700	4.48	0.89	3.19	112
					800	4.04	0.50	3.30	129
					1000	3.51	0.39	3.25	151
					1200	(3.10)	(0.63)	(3.24)	(162)

HORIZON; September 21, 1951; 0127 GCT; 32°45.5'N, 138°51'W; sounding, 2660 fm; wind, 360°, force 3; weather, overcast; sea, slight; wire angle, 18°. 62

0	22.80	4.69	0.21	3	0	22.80	4.69	0.21	3
9	22.78	4.76	0.22	3	10	22.77	4.75	0.22	3
23	22.76	4.73	0.20	3	20	22.76	4.72	0.21	3
52	19.57	5.28	0.21	2	30	22.73	4.79	0.19	3
75	18.00	5.32	0.25	4	50	19.99	5.23	0.21	2
104	17.58	5.13	0.24	2	75	18.00	5.32	0.25	4
153	-	4.78	0.38	4	100	17.63	5.17	0.24	3
200	13.16	4.74	0.69	11	150	16.38	4.79	0.37	5
297	9.33	4.53	1.47	26	200	13.16	4.74	0.69	11
399	7.37	3.78	1.95	42	250	11.06	4.68	1.14	19
498	5.93	2.43	2.65	71	300	9.27	4.53	1.50	27
596	4.96	1.28	3.01	96	400	7.36	3.75	1.95	43
793	4.20	0.37	3.35	129	500	5.91	2.40	2.66	71
996	3.68	0.36	3.36	146	600	4.93	1.24	3.02	98
1195	3.16	0.60	3.32	163	700	4.48	0.64	3.24	117
					800	4.18	0.38	3.35	130
					1000	3.65	0.37	3.36	147
					1200	(3.15)	(0.61)	(3.32)	(163)

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HORIZON; September 21, 1951; 1721 GCT; 33°04.5'N, 136°22'W; sounding, 2580 fm; wind, 155°, force 3; weather, partly cloudy; sea, slight; wire angle, 22°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	22.17	4.80	0.27	3	0	22.17	4.80	0.27	3
9	22.16	4.78	0.28	2	10	22.15	4.78	0.28	2
23	22.14	4.80	0.26	4	20	22.14	4.79	0.27	4
51	19.38	5.33	0.27	2	30	22.13	4.87	0.26	4
74	16.66	5.50	0.30	3	50	19.45	5.32	0.27	2
101	15.60	5.26	0.30	3	75	16.65	5.48	0.31	4
148	14.24	5.27	0.49	3	100	15.65	5.27	0.31	3
194	11.86	4.85	0.89	15	150	14.20	5.25	0.50	3
287	8.72	4.45	1.55	28	200	11.60	4.81	0.94	17
384	7.18	3.67	1.99	43	250	9.86	4.59	1.35	23
479	5.73	2.13	2.72	74	300	8.46	4.38	1.61	29
574	4.97	1.29	3.01	95	400	6.93	3.41	2.14	47
766	4.24	0.44	3.30	129	500	5.57	1.93	2.80	79
964	3.71	0.43	3.26	142	600	4.80	1.12	3.08	101
1162	3.18	0.62	3.24	160	700	4.42	0.58	3.26	120
					800	4.16	0.43	3.30	132
					1000	3.61	0.47	3.26	145
					1100	3.34	0.57	3.24	154

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HORIZON; September 22, 1951; 0715 GCT; 32°53'N, 134°14'W; sounding, 2340 fm; wind, 180°, force 2; weather, partly cloudy; sea, smooth; wire angle, missing.

0	20.94	4.80	0.41	0	20.94	4.80	0.41
9	20.96	4.86	0.37	10	20.95	4.86	0.37
24	20.98	4.85	0.36	20	20.97	4.86	0.36
48	18.86	5.34	0.31	30	20.95	4.88	0.35
72	16.44	5.52	0.36	50	18.80	5.41	0.30
94	16.34	5.25	0.32	75	16.42	5.53	0.36
146	14.48	5.06	0.45	100	16.32	5.20	0.32
192	11.63	4.91	0.88	150	14.30	5.06	0.48
283	8.71	4.17	1.66	200	11.26	4.87	0.96
381	7.12	3.30	2.18	250	9.61	4.48	1.40
475	5.84	1.91	2.81	300	8.36	4.04	1.76
572	5.13	1.04	3.06	400	6.82	3.05	2.32
764	4.26	0.40	3.31	500	5.60	1.62	2.89
955	3.80	0.39	3.38	600	5.00	0.89	3.11
1156	3.29	0.67	3.30	700	4.43	0.51	3.24
				800	4.14	0.40	3.34
				1000	3.71	0.42	3.38
				1100	3.47	0.58	3.34

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HORIZON; September 22, 1951; 2130, 2150 GCT; 32°52'N, 131°58'W; sounding, 2200 fm; wind, 320°, force 3; weather, partly cloudy; sea, slight; wire angle, 09°, 18°.

0	21.03	4.99	0.42	0	21.03	4.99	0.42
10	20.46	5.08	0.38	10	20.46	5.08	0.38
25	19.87	5.28	0.35	20	20.02	5.21	0.36
54	16.17	5.71	0.36	30	18.60	5.36	0.34
79	15.51	5.57	0.40	50	16.45	5.71	0.35
107	14.74	5.45	0.43	75	15.55	5.58	0.39
				100	15.00	5.48	0.43
153	13.21	5.17	0.57	150	13.35	5.20	0.55
201	10.53	4.73	1.13	200	10.60	4.76	1.12
300	7.86	3.34	2.01	250	8.90	4.21	1.61
404	6.36	2.17	2.61	300	7.87	3.33	2.01
504	5.40	1.20	3.00	400	6.42	2.21	2.59
603	4.94	0.59	3.18	500	5.42	1.23	2.99
803	4.16	0.36	3.24	600	4.96	0.60	3.18
1008	3.60	0.53	3.23	700	4.56	0.42	3.23
1208	3.16	0.83	3.23	800	4.18	0.37	3.24
				1000	3.62	0.52	3.23
				1200	3.17	0.83	3.23

66

HORIZON; September 23, 1951; 1310 GCT; 32°40'N, 129°40.5'W; sounding, 2250 fm; wind, 340°, force 4; weather, overcast; sea, moderate; wire angle, 33°.

OBSERVED					INTERPOLATED				
Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L	Z m	T °C	O_2 ml/L	PO_4-P µg at/L	SiO_3-Si µg at/L
0	19.56	4.99	0.51		0	19.56	4.99	0.51	
8	19.56	4.98	0.45		10	19.55	4.97	0.45	
21	19.53	5.00	0.46		20	19.54	4.98	0.46	
46	18.95	5.04	0.46		30	19.48	5.03	0.46	
66	17.78	5.40	0.45		50	18.90	5.09	0.46	
90	15.27	5.44	0.43		75	16.70	5.44	0.44	
126	12.68	5.38	0.55		100	14.45	5.43	0.44	
164	10.92	5.25	0.83		150	11.46	5.31	0.73	
238	8.41	3.86	1.85		200	9.45	4.75	1.23	
316	7.09	3.17	2.21		250	8.15	3.67	1.94	
395	6.18	1.83	2.84		300	7.32	3.28	2.14	
472	5.47	1.13	3.06		400	6.12	1.79	2.87	
632	4.82	0.43	3.27		500	5.32	0.97	3.11	
807	4.24	0.34	3.30		600	4.95	0.53	3.26	
995	3.63	0.51	3.32		700	4.59	0.39	3.29	
					800	4.27	0.36	3.30	
					1000	(3.61)	(0.52)	(3.32)	

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ_T cl/ton	ΔD dyn m	
HUGH M. SMITH; January 15, 1951; 0522 GCT; 20°48'N, 157°30'W; wind, 070°, 35 kt; weather, overcast; sea, high; wire angle, 35°.												1
0	24.50	34.88	4.94		23.42	0	24.50	34.88	23.42	447	0.00	
10	24.51	34.88	4.83		23.42	10	24.51	34.88	23.42	447	0.04	
26	24.52	34.88	4.85		23.42	20	24.51	34.88	23.42	447	0.09	
51	24.52	34.88	4.98		23.42	30	24.52	34.88	23.42	448	0.13	
100	24.42	34.96	4.92		23.51	50	24.52	34.88	23.42	448	0.22	
200	17.41	34.74	4.22		25.24	75	24.48	34.92	23.46	444	0.34	
302	11.93	34.22	4.05		26.02	100	24.42	34.96	23.51	439	0.45	
397	8.76	34.13	3.00		26.50	150	21.17	35.22	24.63	332	0.64	
498	-	34.92	-		-	200	17.41	34.74	25.24	274	0.80	
595	5.98	34.29	1.54		27.02	250	13.87	34.39	25.76	224	0.92	
797	4.74	34.43	0.93		27.28	300	12.00	34.22	26.00	201	1.04	
999	4.00	34.50	1.23		27.41	400	8.67	34.13	26.51	153	1.22	
1197	3.61	34.56	1.39		27.50	500	7.00	34.20	26.81	124	1.36	
						600	5.93	34.29	27.02	104	1.49	
						700	5.20	34.37	27.17	90	1.59	
						800	4.70	34.41	27.26	82	1.69	
						1000	3.99	34.50	27.41	68	1.85	
HUGH M. SMITH; January 15-16, 1951; 2330, 0000 GCT; 18°47'N, 158°01'W; wind, 090°, 25 kt; weather, partly cloudy; sea, high; wire angle, 50°, missing.												2
0a)	-	-	4.85		-	0	24.60	34.84	23.36	453	0.00	
19	24.58	34.84	4.82		23.37	10	24.59	34.84	23.37	452	0.05	
40	24.56	34.83	4.79		23.37	20	24.58	34.84	23.37	452	0.09	
						30	24.57	34.83	23.36	453	0.14	
73	24.49	34.83	4.83		23.39	50	24.52	34.83	23.38	451	0.23	
143	24.08	35.05	4.81		23.68	75	24.48	34.84	23.40	449	0.34	
206	20.20	35.15	4.69		24.84	100	24.40	34.88	23.45	444	0.45	
268	15.00	34.45	3.97		25.57	150	24.00	35.07	23.72	419	0.67	
333p	11.23	34.21	3.61		26.14	200	21.07	35.23	24.67	329	0.86	
301p[b]	10.85	34.19	3.83		26.19	250	17.03	34.70	25.30	269	1.01	
437p[b]	8.72	34.35	1.18		26.67							
521p[b]	7.20	34.33	0.87		26.89							
795p	5.56	34.41	0.78		27.16							
795	5.94	34.41	-		27.12							
HUGH M. SMITH; January 17, 1951; 1808 GCT; 14°30'N, 158°00'W; wind, 060°, 28 kt; weather, partly cloudy; sea, high; wire angle, 45°.												4
0	-	34.62	4.85		-	0	24.50	34.62	23.23	466	0.00	
11	24.52	34.44	4.77		23.09	10	24.52	34.44	23.08	480	0.05	
24	24.52	34.43	4.83		23.08	20	24.52	34.43	23.08	480	0.10	
51	24.52	34.43	4.77		23.08	30	24.52	34.43	23.08	480	0.14	
99	21.44	35.21	4.74		24.55	50	24.52	34.43	23.08	480	0.30	
190	14.82	34.43	3.91		25.59	75	22.62	35.22	24.23	370	0.35	
278	10.62	34.52	0.71		26.49	100	21.40	35.20	24.56	339	0.44	
369	8.65	34.44	0.53		26.75	150	19.00	34.95	25.00	297	0.60	
457	7.37	34.42	0.65		26.93	200	13.92	34.38	25.74	226	0.73	
550	6.48	34.43	0.66		27.06	250	11.09	34.46	26.36	168	0.83	
742	5.21	34.46	0.86		27.23	300	10.07	34.60	26.65	140	0.91	
942	4.37	34.50	1.04		27.37	400	8.13	34.42	26.82	125	1.05	
868p	4.78	34.50	1.06		27.33	500	6.90	34.43	27.00	106	1.18	
						600	6.11	34.44	27.12	96	1.29	
						700	5.47	34.46	27.21	86	1.39	
						800	4.89	34.48	27.30	78	1.48	
						1000	(4.20)	(34.50)	(27.39)	(70)	(1.65)	

a) First two Nansen bottles omitted from cast. Surface oxygen value obtained from a bucket sample.

b) Alternate depths: 394, 527 and 662 meters. Double depths result from disagreement between readings of unprotected thermometers at these depths.

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
6	HUGH M. SMITH; January 18, 1951; 0740 GCT; 13°00'N, 158°00'W; wind, 090°, 23 kt; weather, cloudy; sea, high; wire angle, 22°.										
0	25.40	34.21	4.73		22.64	0	25.40	34.21	22.64	521	0.00
14	25.39	34.23	4.77		22.66	10	25.38	34.22	22.66	520	0.05
32	25.40	34.22	4.79		22.65	20	25.39	34.23	22.66	520	0.10
69	25.36	34.27	4.74		22.70	30	25.40	34.22	22.65	521	0.16
136	13.85	34.39	2.79		25.77	50	25.40	34.24	22.67	519	0.26
266	9.86	34.62	0.41		26.70	75	24.30	34.80	23.42	447	0.38
402	8.67	34.57	0.39		26.85	100	18.30	34.53	24.86	310	0.48
534	7.51	34.52	0.45		26.99	150	12.70	34.40	26.01	201	0.61
674	6.28	34.47	0.38		27.12	200	10.85	34.55	26.47	157	0.70
814	5.36	34.50	0.51		27.26	250	10.06	34.63	26.67	138	0.78
1101	4.25	34.52	0.78		27.40	300	9.55	34.60	26.74	132	0.85
1381	3.45	34.56	1.37		27.51	400	8.70	34.57	26.85	121	0.98
1680	2.81	34.55	1.72		27.56	500	7.86	34.54	26.95	111	1.11
						600	6.91	34.49	27.05	102	1.22
						700	6.12	34.48	27.15	93	1.33
						800	5.46	34.50	27.25	83	1.43
						1000	4.53	34.52	27.37	72	1.60
7	HUGH M. SMITH; January 18, 1951; 1726 GCT; 11°59'N, 157°50'W; wind, 090°, 23 kt; weather, cloudy; sea, high; wire angle, 09°.										
0	-	34.23	4.73		-	0	25.60	34.23	22.60	526	0.00
10	25.60	34.23	4.74		22.60	10	25.60	34.23	22.60	526	0.05
30	25.61	34.21	4.72		22.58	20	25.61	34.22	22.59	527	0.10
45	25.62	34.22	4.71		22.58	30	25.61	34.21	22.58	528	0.16
152	13.75	34.34	3.04		25.75	50	25.62	34.22	22.58	527	0.26
270	9.92	34.62	0.44		26.69	75	25.50	34.26	22.65	521	0.40
386	8.95	34.57	0.71		26.81	100	21.90	35.23	24.44	422	0.50
498	7.99	34.53	0.54		26.93	150	14.00	34.35	25.70	230	0.65
611	-	34.21	-		-	200	11.00	34.55	26.44	159	0.75
723	6.10	34.51	0.34		27.18	250	10.10	34.62	26.66	139	0.83
954	4.72	34.50	0.73		27.33	300	9.68	34.60	26.71	134	0.90
1173	3.87	34.55	1.31		27.46	400	8.82	34.57	26.83	123	1.04
1385	3.28	34.53	1.51		27.50	500	7.97	34.53	26.93	113	1.16
						600	7.12	34.52	27.05	102	1.28
						700	6.30	34.51	27.15	93	1.38
						800	5.55	34.50	27.24	84	1.48
						1000	4.53	34.52	27.37	72	1.66
8	HUGH M. SMITH; January 19, 1951; 0150 GCT; 11°00'N, 157°53'W; wind, 090°, 20 kt; weather, cloudy; sea, moderate; wire angle, 20°.										
0	-	34.34	4.77		-	0	25.80	34.34	22.62	524	0.00
10	25.88	34.33	4.73		22.59	10	25.88	34.33	22.59	527	0.05
27	25.88	34.31	4.72		22.57	20	25.88	34.32	22.58	528	0.10
55	25.84	34.31	4.72		22.58	30	25.88	34.31	22.57	528	0.16
108	17.58	34.69	4.24		25.16	50	25.86	34.31	22.58	528	0.26
214	10.75	34.62	0.34		26.54	75	23.20	35.08	23.96	396	0.38
318	9.70	34.68	0.30		26.77	100	18.80	34.81	24.95	302	0.47
419	8.78	34.59	0.36		26.85	150	12.46	34.40	26.05	196	0.60
526	7.59	34.53	0.55		26.99	200	10.87	34.61	26.51	153	0.68
629	6.57	34.45	0.48		27.06	250	10.35	34.70	26.68	137	0.76
843	5.12	34.54	0.45		27.32	300	9.88	34.70	26.76	130	0.83
1049	4.23	34.51	1.25		27.39	400	8.93	34.61	26.84	122	0.96
1261	3.60	34.53	1.49		27.47	500	7.88	34.55	26.96	111	1.09
						600	6.83	34.46	27.04	103	1.20
						700	6.03	34.48	27.16	92	1.31
						800	5.38	34.54	27.29	79	1.40
						1000	4.40	34.53	27.39	70	1.57

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ_T cl/ton	ΔD dyn m	
HUGH M. SMITH; January 19, 1951; 1032 GCT; 10°00'N, 157°56'W; wind, 080°, 22 kt; weather, overcast; sea, rough; wire angle, 13°.												9
0	-	34.33	4.68		-	0	26.10	34.33	22.52	533	0.00	
10	26.08	34.24	4.67		22.46	10	26.08	34.24	22.46	539	0.05	
23	26.10	34.28	4.69		22.48	20	26.10	34.27	22.47	538	0.11	
53	26.09	34.27	4.68		22.48	30	26.10	34.28	22.48	537	0.16	
106	17.68	34.61	4.26		25.07	50	26.09	34.27	22.48	537	0.27	
210	10.76	-	0.60		-	75	22.50	34.83	23.97	395	0.39	
311	9.50	34.63	0.53		26.77	100	18.12	34.85	24.96	283	0.47	
419	8.45	34.59	0.65		26.90	150	12.48	34.55	26.17	186	0.60	
522	7.49	34.50	0.81		26.98	200	11.00	34.63	26.51	153	0.68	
627	6.58	34.55	0.80		27.14	250	10.12	34.65	26.68	137	0.76	
830	5.22	34.48	1.00		27.26	300	9.63	34.64	26.75	130	0.83	
1027	4.36	34.52	1.37		27.40	400	8.66	34.60	26.88	118	0.96	
1239	3.71	34.52	1.51		27.46	500	7.71	34.52	26.96	111	1.09	
						600	6.82	34.54	27.10	97	1.20	
						700	6.06	34.52	27.19	89	1.30	
						800	5.42	34.48	27.24	84	1.40	
						1000	4.45	34.52	27.38	71	1.58	
HUGH M. SMITH; January 19, 1951; 1930, 2015 GCT; 9°00'N, 157°58'W; wind, 090°, 22 kt; weather, moderate rain; sea, high; wire angle, 10°, 10°.												10
7	26.45	34.24	4.70		22.34	0	(26.50)	(34.24)	(22.33)	(552)	(0.00)	
13	26.45	34.24	4.72		22.34	10	26.45	34.24	22.34	550	0.06	
22	26.46	34.25	4.73		22.35	20	26.45	34.25	22.35	550	0.11	
53	26.47	34.23	4.70		22.33	30	26.46	34.24	22.34	551	0.16	
107	15.57	34.59	3.60		25.55	50	26.47	34.23	22.33	551	0.28	
217	10.48	34.69	0.39		26.64	75	23.12	34.77	23.75	416	0.40	
325	9.48	34.67	0.63		26.80	100	17.72	34.69	25.12	285	0.49	
435	8.49	34.59	0.56		26.90	150	11.55	34.64	26.41	162	0.60	
540	7.26	34.53	0.67		27.03	200	10.68	34.68	26.60	144	0.68	
646	6.32	34.51	0.73		27.15	250	10.28	34.69	26.68	137	0.75	
						300	9.73	34.69	26.78	128	0.82	
897	4.94	34.58	0.91		27.37	400	8.80	34.62	26.87	119	0.95	
1103	4.06	34.52	1.26		27.42	500	7.73	34.55	26.98	109	1.07	
1305	3.52	34.61	1.50		27.54	600	6.71	34.51	27.09	98	1.18	
						700	5.93	34.52	27.20	87	1.29	
						800	5.39	34.55	27.29	79	1.38	
						1000	4.48	34.54	27.39	70	1.55	
HUGH M. SMITH; January 20, 1951; 0540 GCT; 8°04'N, 157°58'W; wind, 090°, 23 kt; weather, cloudy; sea, high; wire angle, 10°.												11
0	26.70	34.50	4.65		22.46	0	26.70	34.50	22.46	539	0.00	
10	26.72	34.50	4.70		22.45	10	26.72	34.50	22.45	540	0.05	
25	26.72	34.50	4.77		22.45	20	26.72	34.50	22.45	540	0.11	
55	26.76	34.50	4.66		22.44	30	26.72	34.50	22.45	540	0.16	
110	18.27	34.74	3.12		25.02	50	26.75	34.50	22.44	541	0.27	
215	10.64	34.66	0.86		26.60	75	23.40	34.95	23.80	411	0.39	
320	9.44	34.67	0.98		26.81	100	18.79	34.77	24.92	305	0.48	
429	8.66	34.61	1.20		26.89	150	13.45	34.53	25.96	206	0.61	
533	7.63	34.58	0.78		27.02	200	11.00	34.63	26.51	154	0.70	
638	6.59	34.54	1.00		27.13	250	10.19	34.69	26.70	135	0.78	
843	5.40	34.53	0.79		27.28	300	9.62	34.68	26.79	127	0.84	
1050	4.42	34.52	1.51		27.38	400	8.88	34.62	26.86	120	0.98	
1256	3.68	34.57	1.48		27.50	500	8.00	34.59	26.97	109	1.10	
						600	6.94	34.55	27.09	98	1.21	
						700	6.18	34.61	27.24	84	1.31	
						800	5.64	34.53	27.25	83	1.40	
						1000	4.67	34.52	27.35	73	1.58	

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
12	HUGH M. SMITH; January 20, 1951; 1413 GCT; 7°08'N, 157°58'W; wind, 080°, 20 kt; weather, partly cloudy; sea, rough; wire angle, 12°.										
0	26.70	34.39	4.63		22.38	0	26.70	34.39	22.38	547	0.00
10	26.71	34.37	4.64		22.36	10	26.71	34.37	22.36	549	0.06
26	26.72	34.39	4.64		22.37	20	26.72	34.38	22.36	548	0.11
55	26.74	34.48	4.63		22.43	30	26.72	34.40	22.38	547	0.16
108	18.52	34.67	3.52		24.91	50	26.73	34.47	22.43	542	0.27
217	10.42	34.70	0.82		26.66	75	25.40	34.94	23.19	469	0.40
323	9.15	34.64	1.07		26.83	100	24.00	35.06	23.71	420	0.51
433	8.48	34.59	1.05		26.90	150	13.31	34.50	25.96	205	0.67
538	7.74	34.56	0.88		26.99	200	10.83	34.68	26.58	147	0.76
642	6.71	34.52	0.87		27.10	250	10.02	34.69	26.73	133	0.83
851	5.31	34.52	1.25		27.28	300	9.40	34.66	26.81	125	0.90
1065	4.32	34.53	1.43		27.40	400	8.68	34.61	26.88	118	1.03
1267	3.78	34.53	1.59		27.46	500	8.07	34.57	26.95	112	1.15
						600	7.15	34.53	27.05	102	1.27
						700	6.28	34.52	27.16	92	1.38
						800	5.57	34.52	27.25	83	1.47
						1000	4.56	34.53	27.37	71	1.65
13	HUGH M. SMITH; January 21, 1951; 0020 GCT; 5°59'N, 158°00'W; wind, 100°, 18 kt; weather, cloudy; sea, rough; wire angle, 00°.										
0	26.60	35.11	4.71		22.95	0	26.60	35.11	22.95	492	0.00
9	26.60	35.12	4.65		22.96	10	26.60	35.12	22.96	492	0.05
35	26.56	35.11	4.64		22.96	20	26.58	35.12	22.96	491	0.10
66	26.54	35.08	4.65		22.94	30	26.57	35.11	22.96	491	0.15
121	25.18	35.15	4.13		23.42	50	26.55	35.10	22.96	492	0.25
232	10.31	34.72	0.54		26.70	75	26.52	35.09	22.96	491	0.37
338	8.92	34.65	1.53		26.88	100	25.87	35.15	23.21	468	0.49
460	8.18	34.57	1.33		26.93	150	17.24	34.58	25.15	282	0.68
553	7.38	34.60	0.82		27.07	200	11.65	34.64	26.39	164	0.79
662	6.31	34.54	0.53		27.17	250	10.09	34.72	26.74	132	0.87
887	4.89	34.55	1.10		27.35	300	9.40	34.68	26.82	124	0.94
1097	4.12	34.59	1.44		27.47	400	8.50	34.59	26.90	117	1.06
1296	3.52	34.61	1.68		27.54	500	7.86	34.57	26.98	109	1.18
						600	6.90	34.58	27.12	95	1.30
						700	6.00	34.54	27.21	86	1.40
						800	5.30	34.55	27.31	78	1.49
						1000	4.46	34.57	27.42	67	1.65
14	HUGH M. SMITH; January 21, 1951; 0845 GCT; 5°00'N, 158°00'W; wind, 130°, 25 kt; weather, partly cloudy; sea, very rough; wire angle, 15°.										
0	26.50	35.09	4.64		22.97	0	26.50	35.09	22.97	491	0.00
10	26.46	35.08	4.56		22.97	10	26.46	35.08	22.97	490	0.05
25	26.41	35.12	4.61		23.01	20	26.44	35.09	22.98	489	0.10
55	26.20	35.10	4.58		23.07	30	26.40	35.12	23.02	486	0.15
112	26.11	35.16	4.47		23.14	50	26.20	35.10	23.07	481	0.24
214	11.78	34.63	1.17		26.36	75	26.18	35.12	23.09	479	0.36
319	9.20	34.67	1.63		26.85	100	26.12	35.16	23.14	474	0.48
426	8.26	34.61	1.18		26.95	150	24.12	35.10	23.70	420	0.71
530	7.68	34.59	0.96		27.02	200	12.77	34.55	26.11	191	0.87
633	6.66	34.56	0.80		27.14	250	10.60	34.71	26.64	141	0.95
836	5.14	34.53	1.00		27.31	300	9.52	34.69	26.81	125	1.02
1046	4.24	34.56	1.40		27.43	400	8.47	34.62	26.92	114	1.15
1046	4.32	34.56	-		27.42	500	7.88	34.59	26.99	108	1.27
1252	3.52	34.56	1.78		27.50	600	6.97	34.57	27.11	96	1.38
						700	6.13	34.55	27.20	88	1.48
						800	5.38	34.53	27.28	80	1.57
						1000	4.44	34.56	27.41	68	1.74

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m	
HUGH M. SMITH; January 21, 1951; 2015 GCT; 3°55'N, 157°54'W; wind, 140°, 22 kt; weather, partly cloudy; sea, rough; wire angle, 42°.												15
2	26.22	35.07	4.61		23.04	0	(26.20)	(35.07)	(23.04)	(483)		
9	26.22	35.08	4.61		23.04	10	26.22	35.08	23.05	483		
15	26.22	35.12	4.68		23.08	20	26.22	35.11	23.07	481		
46	26.16	35.07	4.60		23.06	30	26.20	35.10	23.07	481		
83	25.87	35.07	4.61		23.15	50	26.12	35.07	23.07	481		
160	22.10	34.94	3.67		24.16	75	25.95	35.07	23.12	476		
240	10.46	34.61	2.30		26.59	100	25.60	35.10	23.25	463		
321	9.70	34.69	2.37		26.78	150	25.39	35.11	23.33	456		
406	-	34.61	1.07		-	200	12.70	34.55	26.12	190		
488	7.73	34.59	0.93		27.01	250	10.30	34.64	26.64	141		
480a)	7.78	34.59	0.99		27.00	300	9.90	34.68	26.74	132		
597a)	6.68	34.58	0.93		27.15	400	8.65	34.61	26.89	118		
708a)	5.78	34.55	1.31		27.25	500	7.62	34.59	27.03	104		
						600	6.65	34.58	27.16	92		
						700	5.82	34.56	27.25	83		
HUGH M. SMITH; January 22, 1951; 0640 GCT; 3°02'N, 157° 57'W; wind, 110°, 19 kt; weather, overcast; sea, rough; wire angle, 51°.												16
0	26.20	35.08	4.62		23.05	0	26.20	35.08	23.05	483	0.00	
4	26.26	35.09	4.64		23.04	10	26.26	35.09	23.04	484	0.05	
26	26.28	35.10	4.67		23.04	20	26.28	35.10	23.04	483	0.10	
50	26.14	35.08	4.62		23.07	30	26.28	35.10	23.04	483	0.14	
91	25.60	35.11	4.67		23.26	50	26.14	35.08	23.07	481	0.24	
170	22.68	34.98	3.68		24.03	75	25.85	35.11	23.18	470	0.36	
246	10.68	34.69	2.40		26.61	100	25.50	35.11	23.29	460	0.48	
336	9.90	34.72	2.09		26.77	150	25.50	35.11	23.29	460	0.71	
419	8.60	34.66	1.31		26.93	200	12.33	34.63	26.26	177	0.87	
511	7.60	34.60	1.31		27.04	250	10.65	34.70	26.62	142	0.96	
709	5.80	34.56	1.65		27.25	300	10.20	34.72	26.72	133	1.03	
923	4.84	34.57	1.88		27.38	400	9.90	34.68	26.74	132	1.17	
1166	3.94	34.56	1.84		27.46	500	7.73	34.60	27.02	105	1.29	
						600	6.75	34.57	27.14	94	1.40	
						700	5.87	34.56	27.24	84	1.50	
						800	5.33	34.56	27.31	78	1.59	
						1000	4.50	34.57	27.41	68	1.75	
HUGH M. SMITH; January 22, 1951; 1623, 1730 GCT; 2°00'N, 158°01'W; wind, 110°, 19 kt; weather, cloudy; sea, rough; wire angle, 46°, 49°.												17
0	25.60	35.08	4.59		23.24	0	25.60	35.08	23.24	465	0.00	
11	25.62	35.08	4.64		23.23	10	25.62	35.08	23.23	465	0.05	
26	25.64	-	4.65		-	20	25.63	35.08	23.23	466	0.09	
56	25.64	35.09	4.62		23.23	30	25.64	35.09	23.23	465	0.14	
104	25.52	35.10	4.62		23.28	50	25.64	35.09	23.23	465	0.23	
194	15.22	34.74	2.42		25.74	75	25.60	35.09	23.25	464	0.35	
276b)	10.42	34.90	1.57		26.82	100	25.53	35.10	23.28	461	0.47	
375	9.62	34.70	1.48		26.80	150	24.95	35.09	23.45	445	0.70	
466	8.39	34.65	1.23		26.96	200	14.98	34.73	25.79	222	0.86	
569	7.47	34.56	1.28		27.03	250	10.70	34.74	26.65	140	0.96	
792	5.34	34.50	1.68		27.26	300	10.22	34.72	26.72	134	1.03	
						400	9.32	34.68	26.84	122	1.16	
1121	4.06	34.55	2.03		27.44	500	8.06	34.62	26.99	108	1.29	
1397	3.20	34.56	2.03		27.54	600	7.18	34.54	27.05	102	1.40	
						700	6.10	34.51	27.17	90	1.51	
						800	5.28	34.50	27.27	81	1.60	
						1000	4.47	34.54	27.39	70	1.77	

a) Probable pretrip.
b) Anomalous values at this depth. Bottle apparently leaked on way up.

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
18	HUGH M. SMITH; January 23, 1951; 0245 GCT; 0°58'N, 158°07'W; wind, 080°, 12 kt; weather, partly cloudy; sea, moderate; wire angle, 50°.										
0	25.20	35.07	4.73		23.35	0	25.20	35.07	23.35	454	0.00
11	25.20	35.08	-		23.36	10	25.20	35.08	23.36	453	0.04
24	24.94	35.05	4.70		23.42	20	24.95	35.06	23.42	447	0.09
47	24.90	35.04	4.65		23.42	30	24.93	35.05	23.42	447	0.14
90	24.83	35.06	4.61		23.46	50	24.90	35.04	23.42	447	0.22
158	21.72	-	-		-	75	24.87	35.05	23.44	445	0.34
230	11.94	34.81	2.71		26.47	100	24.83	35.06	23.46	444	0.45
310	10.60	34.74	1.66		26.66	150	23.82	35.04	23.75	416	0.67
389	9.79	34.65	1.40		26.73	200	14.67	34.72	25.85	216	0.83
476	7.94	34.56	1.18		26.96	250	11.49	34.79	26.54	150	0.92
645	6.40	34.50	1.61		27.13	300	10.73	34.75	26.65	140	1.00
818	5.19	34.50	2.00		27.28	400	9.59	34.64	26.76	130	1.14
1052	4.28	34.50	2.02		27.38	500	7.63	34.55	27.00	107	1.27
						600	6.70	34.50	27.09	98	1.38
						700	5.92	34.50	27.19	89	1.48
						800	5.28	34.50	27.27	81	1.58
						1000	4.41	34.50	27.37	72	1.75
19	HUGH M. SMITH; January 23, 1951; 1132 GCT; 0°01'N, 158°02'W; wind, 070°, 12 kt; weather, cloudy; sea, rough; wire angle, 40°.										
0	25.00	35.17	4.53		23.49	0	(25.00)	(35.17)	(23.49)	(441)	(0.00)
9	25.00	-	-		-	10	25.00	35.20	23.51	439	0.04
20	25.01	35.25	4.53		23.55	20	25.01	35.25	23.55	435	0.09
41	24.88	35.17	4.45		23.53	30	24.96	35.21	23.53	437	0.13
79	24.80	35.15	4.43		23.54	50	24.86	35.17	23.53	436	0.22
155	21.80	-	3.30		-	75	24.81	35.15	23.53	436	0.33
233	12.84	34.94	3.18		26.40	100	24.66	35.14	23.57	433	0.44
316	10.76	34.75	1.88		26.64	150	21.90	35.10	24.34	360	0.64
396	9.46	34.70	1.28		26.83	200	17.20	35.05	25.52	247	0.79
483	8.23	34.65	1.37		26.98	250	12.35	34.88	26.45	159	0.90
649	6.08	34.56	1.74		27.22	300	11.05	34.78	26.61	143	0.98
815	5.09	34.52	1.96		27.31	400	9.38	34.70	26.84	122	1.12
986	4.25	34.58	1.99		27.45	500	7.98	34.64	27.01	105	1.24
						600	6.60	34.59	27.17	90	1.35
						700	5.72	34.54	27.25	83	1.44
						800	5.13	34.52	27.30	78	1.53
						1000	(4.20)	(34.59)	(27.46)	(63)	(1.69)
20	HUGH M. SMITH; January 23, 1951; 2122 GCT; 0°55'S, 157°54'W; wind, 140°, 13 kt; weather, partly cloudy; sea, rough; wire angle, 40°.										
0	25.30	35.27	4.65		23.47	0	25.30	35.27	23.47	442	0.00
11	25.18	-	-		-	10	25.19	35.25	23.49	440	0.04
26	25.16	35.21	4.62		23.47	20	25.17	35.22	23.48	442	0.09
52	25.12	35.26	4.57		23.52	30	25.15	35.22	23.48	442	0.13
102	25.10	35.25	4.51		23.52	50	25.12	35.26	23.52	438	0.22
204	16.85	35.47	2.79		25.93	75	25.11	35.26	23.53	437	0.33
302	10.68	34.81	2.19		26.70	100	25.10	35.25	23.52	438	0.44
412	9.32	34.70	1.65		26.85	150	24.97	35.26	23.57	433	0.66
515	7.70	34.59	1.36		27.02	200	17.12	35.48	25.87	214	0.83
628	6.50	34.57	1.62		27.17	250	12.33	35.00	26.54	150	0.92
850	4.96	34.54	2.28		27.34	300	10.70	34.81	26.70	135	1.00
1083	4.07	34.54	2.23		27.44	400	9.43	34.71	26.84	122	1.13
1349	3.30	34.58	2.14		27.54	500	7.90	34.61	27.00	106	1.25
						600	6.78	34.57	27.13	94	1.36
						700	5.94	34.55	27.23	85	1.46
						800	5.26	34.54	27.30	78	1.55
						1000	4.34	34.54	27.41	68	1.72

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m	
HUGH M. SMITH; January 24, 1951; 0840 GCT; 2°00'S, 158°00'W; wind, 120°, 11 kt; weather, partly cloudy; sea, rough; wire angle, 30°.												21
0	25.80	35.35	4.71		23.38	0	25.80	35.35	23.38	451	0.00	
9	25.82	35.51a)	4.81		23.49a)	10	25.82	35.34	23.37	453	0.04	
26	25.64	35.33	4.70		23.41	20	25.80	35.35	23.38	451	0.09	
50	25.59	35.29	4.71		23.40	30	25.65	35.34	23.42	448	0.14	
106	25.44	35.32	4.66		23.47	50	25.59	35.29	23.40	449	0.22	
191	19.84	35.42	3.65		25.14	75	25.53	35.30	23.43	447	0.34	
286	10.14	34.77	2.10		26.77	100	25.45	35.32	23.47	443	0.45	
377	9.63	34.70	1.72		26.80	150	25.38	35.32	23.49	441	0.67	
474	9.03	34.67	1.32		26.88	200	18.21	35.51	25.63	237	0.85	
571	7.60	34.61	2.01		27.05	250	11.55	34.91	26.62	143	0.94	
772	5.72	34.57	2.02		27.27	300	10.06	34.75	26.77	129	1.02	
973	4.35	34.55	2.19		27.41	400	9.54	34.69	26.81	125	1.15	
1175	3.70	34.58	-		27.50	500	8.72	34.66	26.92	115	1.28	
						600	7.26	34.60	27.09	98	1.39	
						700	6.33	34.58	27.20	88	1.50	
						800	5.50	34.56	27.29	79	1.59	
						1000	4.23	34.56	27.43	66	1.76	
HUGH M. SMITH; January 24, 1951; 1710 GCT; 3°00'S, 157°59'W; wind, 110°, 14 kt; weather, cloudy; sea, rough; wire angle, 18°.												22
0	26.20	35.50	4.74		23.37	0	26.20	35.50	23.37	452	0.00	
10	26.16	-	4.75		-	10	26.16	35.49	23.36	452	0.04	
24	26.18	35.48	4.73		23.36	20	26.17	35.48	23.36	453	0.09	
52	26.16	35.51	4.67		23.39	30	26.18	35.48	23.36	453	0.14	
104	25.72	35.44	4.65		23.47	50	26.16	35.51	23.39	450	0.23	
197	17.46	35.49	3.57		25.80	75	26.16	35.51	23.39	450	0.34	
293	10.60	34.81	1.72		26.72	100	25.97	35.48	23.43	447	0.45	
394	9.22	34.70	1.87		26.87	150	25.52	35.46	23.55	435	0.68	
494	8.26	34.63	1.44		26.96	200	15.95	35.35	26.05	197	0.84	
595	6.88	34.58	1.55		27.13	250	11.85	34.92	26.57	147	0.93	
798	5.20	34.51	2.02		27.29	300	10.45	34.79	26.73	132	1.00	
1005	4.40	34.59	2.24		27.44	400	9.18	34.70	26.87	119	1.14	
1236	3.56	34.61	2.40		27.54	500	8.13	34.63	26.98	108	1.26	
						600	6.80	34.57	27.13	94	1.37	
						700	5.85	34.53	27.22	86	1.47	
						800	5.19	34.51	27.29	80	1.56	
						1000	4.42	34.59	27.44	65	1.72	
HUGH M. SMITH; January 25, 1951; 0123 GCT; 4°00'S, 158°00'W; wind, 120°, 14 kt; weather, partly cloudy; sea, rough; wire angle, 34°.												23
0	27.00	35.69	4.72		23.26	0	27.00	35.69	23.26	463	0.00	
9	26.97	-	4.92		-	10	26.96	35.68	23.26	462	0.05	
21	26.80	35.66	4.72		23.30	20	26.81	35.66	23.30	459	0.09	
46	26.72	35.66	4.70		23.33	30	26.77	35.66	23.31	458	0.14	
90	26.28	35.54	4.65		23.37	50	26.70	35.66	23.33	456	0.23	
170	23.86	35.54	4.64		24.11	75	26.43	35.58	23.36	454	0.34	
249	12.77	34.98	1.88		26.44	100	26.24	35.53	23.38	451	0.46	
333	9.92	34.79	1.63		26.82	150	25.00	35.68	23.88	404	0.68	
413	8.87	34.64	1.82		26.88	200	21.13	35.69	25.00	297	0.85	
495	7.92	34.60	2.11		26.99	250	12.75	34.98	26.45	159	0.97	
655	6.36	34.56	2.36		27.18	300	10.75	34.83	26.71	134	1.05	
823	5.12	34.51	2.22		27.30	400	9.05	34.65	26.86	120	1.18	
1008	4.28	34.52	2.27		27.40	500	7.87	34.59	26.99	107	1.30	
						600	6.87	34.57	27.12	95	1.41	
						700	5.97	34.55	27.22	86	1.51	
						800	5.26	34.52	27.29	80	1.61	
						1000	4.31	34.52	27.39	69	1.77	

a) Anomalous values.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
24	HUGH M. SMITH; January 25, 1951; 0903 GCT; 5°00'S, 158°00'W; wind, 120°, 16 kt; weather, partly cloudy; sea, rough; wire angle, 24°.										
0	26.40	35.51	4.78		23.31	0	26.40	35.51	23.31	458	0.00
9	26.44	-	-		-	10	26.44	35.49	23.29	460	0.05
23	26.42	35.47	4.76		23.28	20	26.42	35.47	23.28	461	0.09
51	26.28	35.48	4.71		23.33	30	26.41	35.48	23.29	460	0.14
102	26.20	35.46	4.70		23.34	50	26.29	35.48	23.33	456	0.23
194	23.47	35.66	3.82		24.32	75	26.24	35.46	23.33	456	0.34
284	11.12	34.86	2.11		26.66	100	26.21	35.46	23.34	456	0.46
380	9.06	34.69	1.89		26.89	150	26.16	35.46	23.35	454	0.69
475	8.03	34.61	1.90		26.99	200	22.73	35.79	24.63	332	0.89
572	7.22	34.59	1.91		27.09	250	14.20	35.12	26.26	177	1.02
758	5.93	34.54	2.48		27.22	300	13.00	34.83	26.28	175	1.11
958	4.53	34.55	2.23		27.39	400	8.80	34.66	26.90	116	1.26
1157	3.94	34.56	2.43		27.46	500	7.80	34.60	27.01	106	1.38
						600	7.03	34.59	27.11	96	1.49
						700	6.32	34.55	27.18	90	1.60
						800	5.60	34.54	27.26	82	1.69
						1000	4.34	34.56	27.42	67	1.86
25	HUGH M. SMITH; January 25, 1951; 1708 GCT; 6°01'S, 158°06'W; wind, 090°, 13 kt; weather, partly cloudy; sea, rough; wire angle, 15°.										
2	26.89	35.62	4.69		23.24	0	(26.90)	(35.62)	(23.24)	(465)	(0.00)
12	26.89	35.63	4.70		23.25	10	26.89	35.63	23.25	464	0.05
26	26.90	35.68	4.69		23.28	20	26.89	35.65	23.26	462	0.09
55	26.90	35.60	4.71		23.22	30	26.90	35.67	23.28	461	0.14
108	26.86	35.62	4.63		23.25	50	26.90	35.61	23.23	465	0.23
208	21.94	35.82	3.74		24.87	75	26.90	35.61	23.23	465	0.35
307	11.92	34.86	1.93		26.51	100	26.87	35.62	23.25	464	0.47
409	8.40	34.62	2.98		26.94	150	26.49	35.69	23.42	447	0.70
508	7.24	34.56	2.76		27.06	200	22.60	35.87	24.73	323	0.89
609	6.52	34.56	2.63		27.16	250	16.90	35.31	25.79	221	1.03
808	5.30	34.50	2.06		27.27	300	12.39	34.90	26.45	158	1.13
1013	4.42	34.52	2.29		27.38	400	8.58	34.63	26.92	115	1.28
1216	3.76	34.54	2.55		27.47	500	7.30	34.56	27.05	102	1.39
						600	6.57	34.56	27.15	92	1.50
						700	5.90	34.53	27.22	86	1.60
						800	5.33	34.50	27.26	82	1.69
						1000	4.48	34.52	27.38	71	1.86
26	HUGH M. SMITH; January 26, 1951; 0120 GCT; 7°00'S, 158°01'W; wind, 100°, 13 kt; weather, partly cloudy; sea, rough; wire angle, 28°.										
0	27.50	35.77	4.69		23.16	0	27.50	35.77	23.16	472	0.00
9	27.45	-	4.63		-	10	27.44	35.76	23.17	471	0.05
21	27.38	35.75	4.59		23.18	20	27.39	35.75	23.18	470	0.09
46	27.34	35.74	4.56		23.19	30	27.36	35.74	23.18	470	0.14
92	27.17	35.74	4.51		23.24	50	27.29	35.74	23.20	468	0.24
176	23.64	35.91	3.85		24.46	75	27.24	35.74	23.22	466	0.35
258	16.00	35.24	2.89		25.95	100	27.08	35.74	23.27	462	0.47
343	10.53	34.79	1.57		26.72	150	25.22	35.86	23.94	398	0.69
427	8.70	34.67	2.39		26.93	200	22.45	35.85	24.76	320	0.87
513	7.35	34.60	2.51		27.08	250	16.73	35.30	25.83	218	1.01
679	5.97	34.51	2.63		27.19	300	12.53	34.95	26.47	157	1.11
850	5.20	34.56	2.05		27.32	400	9.19	34.71	26.88	118	1.25
1035	4.44	34.54	2.20		27.39	500	7.50	34.61	27.06	101	1.37
						600	6.52	34.53	27.14	94	1.48
						700	5.84	34.51	27.21	87	1.58
						800	5.40	34.54	27.29	80	1.67
						1000	4.60	34.55	27.39	70	1.84

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; January 29, 1951; 1955 GCT; 1°58'N, 155°02'W; wind, 090°, 16 kt; weather, partly cloudy; sea, rough; wire angle, 41°. 27

0	25.40	-	4.81	-							
8	25.43	35.09	4.76	23.30							
41	25.40	35.12	4.75	23.33							
77	25.33	35.15	4.68	23.38							
146	24.85	35.24	4.52	23.59							
242	10.96	34.80	1.92	26.65							

HUGH M. SMITH; January 30, 1951; 0400 GCT; 3°00'N, 155°04'W; wind, 080°, 15 kt; weather, partly cloudy; sea, rough; wire angle, 43°. 28

0	25.60	35.08	4.78	23.22							
10	25.63	35.09	4.78	23.24							
44	25.48	35.06	4.73	23.26							
92	25.44	35.10	4.69	23.30							
183	12.86	34.69	2.02	26.20							
290	10.30	34.74	1.52	26.72							

HUGH M. SMITH; January 30, 1951; 1244 GCT; 3°58'N, 155°04'W; wind, 090°, 18 kt; weather, missing; sea, rough; wire angle, 25°. 29

0	26.60	35.08	4.69	22.92							
12	26.64	35.08	4.70	22.91							
67	26.63	35.08	4.66	22.92							
136	25.06	35.04	4.19	23.37							
277	9.62	34.69	2.09	26.79							
413	8.50	34.64	1.46	26.93							

HUGH M. SMITH; January 30, 1951; 2022 GCT; 4°57'N, 155°04'W; wind, 070°, 21 kt; weather, overcast; sea, rough; wire angle, 32°. 30

0	26.60	34.99	4.73	22.87							
8	26.58	34.94	4.71	22.83							
48	26.58	34.98	4.70	22.86							
124	25.73	35.16	4.22	23.26							
220	11.86	34.68	1.11	26.39							
321	9.31	34.70	1.45	26.85							

HUGH M. SMITH; January 31, 1951; 0422 GCT; 5°59'N, 155°03'W; wind, 070°, 20 kt; weather, overcast; sea, very rough; wire angle, 32°. 31

0	26.70	35.07	4.75	22.90							
15	26.68	35.07	4.74	22.89							
73	26.39	35.13	4.70	23.03							
145	21.08	34.90	4.04	24.41							
295	9.74	34.70	0.87	26.78							
436	8.38	34.62	1.02	26.94							

HUGH M. SMITH; January 31, 1951; 1145 GCT; 6°57'N, 154°56'W; wind, 070°, 24 kt; weather, intermittent slight rain; sea, very rough; wire angle, 05°. 32

5	26.63	35.14	4.71	22.96							
19	26.64	35.08	4.72	22.91							
79	26.62	35.08	4.63	22.92							
156	16.05	34.66	3.08	25.49							
303	9.48	34.65	1.09	26.78							
442	8.66	34.63	1.23	26.90							

HUGH M. SMITH; January 31, 1951; 2023 GCT; 5°58'N, 155°08'W; wind, 090°, 14 kt; weather, overcast; sea, very rough; wire angle, missing. 33

0	26.60	35.10	4.70	22.94							
9	26.62	35.03	4.69	22.88							
54	26.62	35.07	4.68	22.91							
110	26.12	35.08	4.67	23.08							
222	11.87	34.66	1.31	26.37							
335	9.52	34.69	0.83	26.81							

HBL

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OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
34	HUGH M. SMITH; February 1, 1951; 0422 GCT; 5°00'N, 155°28'W; wind, 090°, 19 kt; weather, partly cloudy; sea, rough; wire angle, 20°.										
0	26.60	34.98	4.69		22.85						
8	26.64	34.99	4.69		22.85						
53	26.60	34.99	4.69		22.86						
107	26.35	35.02	4.61		22.96						
215	12.24	34.64	1.00		26.28						
323	9.44	34.68	1.02		26.81						
35	HUGH M. SMITH; February 1, 1951; 1201 GCT; 4°04'N, 155°46'W; wind, 140°, 19 kt; weather, partly cloudy; sea, rough; wire angle, 24°.										
0	26.60	35.08	4.69		22.92						
8	26.62	35.06	4.70		22.91						
51	26.64	35.08	4.66		22.91						
105	26.14	35.02	4.52		23.03						
209	12.46	34.65	1.65		26.25						
316	9.30	34.69	1.59		26.85						
36	HUGH M. SMITH; February 1, 1951; 2024 GCT; 3°06'N, 156°09'W; wind, 100°, 18 kt; weather, partly cloudy; sea, rough; wire angle, 40°.										
0	26.50	35.10	4.70		22.97						
11	26.52	35.13	4.70		22.99						
52	26.44	35.09	4.70		22.98						
106	25.56	35.11	4.45		23.27						
223	11.18	34.72	2.36		26.54						
346	10.01	34.71	2.12		26.74						
37	HUGH M. SMITH; February 2, 1951; 0414 GCT; 2°07'N, 156°33'W; wind, 110°, 14 kt; weather, partly cloudy; sea, rough; wire angle, 39°.										
0	25.60	35.15	4.74		23.28						
8	25.63	35.20	4.78		23.32						
44	25.46	35.18	4.77		23.36						
84	25.44	35.15	4.75		23.34						
162	23.40	35.04	4.00		23.87						
250	10.92	34.75	2.11		26.62						
38	HUGH M. SMITH; February 2, 1951; 1126 GCT; 2°59'N, 156°43'W; wind, 080°, 17 kt; weather, partly cloudy; sea, rough; wire angle, 36°.										
0	26.50	35.11	4.69		22.97						
12	26.54	35.14	4.65		22.99						
61	26.54	35.10	4.66		22.96						
119	25.76	35.10	4.22		23.20						
232	10.78	34.77	1.65		26.65						
365	9.72	34.71	1.46		26.79						
39	HUGH M. SMITH; February 2, 1951; 1850 GCT; 4°02'N, 157°02'W; wind, 090°, 15 kt; weather, partly cloudy; sea, moderate; wire angle, 38°.										
0	26.50	35.09	4.67		22.95						
12	26.54	35.08	4.67		22.95						
59	26.54	35.12	4.67		22.97						
110	25.86	35.07	4.37		23.15						
206	11.22	34.71	0.97		26.53						
323	9.18	34.69	1.64		26.87						
40	HUGH M. SMITH; February 3, 1951; 0211 GCT; 5°04'N, 157°17'W; wind, 080°, 18 kt; weather, partly cloudy; sea, rough; wire angle, 18°.										
0	26.60	35.11	4.70		22.93						
9	26.64	35.12	4.70		22.94						
57	26.50	35.12	4.69		22.99						
113	26.46	35.12	4.68		23.00						
227	11.01	34.72	0.82		26.56						
345	9.03	34.69	1.50		26.89						

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

41 HUGH M. SMITH; February 3, 1951; 0826 GCT; 5°58'N, 157°26'W; wind, 090°, 18 kt; weather, partly cloudy; sea, rough; wire angle, <05°.

6	26.64	35.16	4.76	22.97
16	26.63	35.18	4.74	22.99
66	26.58	35.18	4.74	23.01
125	26.48	35.17	4.63	23.03
241	10.58	34.69	0.92	26.63
357	8.81	34.66	1.00	26.90

42 HUGH M. SMITH; February 3, 1951; 1550 GCT; 6°50'N, 157°33'W; wind, 080°, 18 kt; weather, cloudy; sea, rough; wire angle, <05°.

10	26.70	35.05	4.70	22.87
20	26.72	35.07	4.72	22.88
70	26.68	35.19	4.70	22.98
131	21.04	34.87	3.59	24.40
247	10.21	34.68	0.65	26.69
363	9.07	34.62	0.93	26.83

43 HUGH M. SMITH; February 3, 1951; 2319 GCT; 6°00'N, 157°53'W; wind, 100°, 15 kt; weather, intermittent slight rain; sea, very rough; wire angle, <05°.

6	26.66	35.19	4.70	22.99
16	26.62	35.19	4.72	23.00
67	26.54	35.19	4.71	23.03
126	24.28	35.08	3.91	23.64
245	10.58	34.67	0.67	26.61
363	8.88	34.64	0.96	26.88

44 HUGH M. SMITH; February 4, 1951; 0827 GCT; 5°00'N, 158°34'W; wind, 080°, 18 kt; weather, partly cloudy; sea, rough; wire angle, missing.

0	26.50	35.20	4.73	23.05
9	26.51	35.17	4.73	23.02
60	26.50	35.18	4.70	23.03
118	26.49	35.18	4.68	23.04
230	11.54	34.65	1.11	26.42
351	9.18	34.63	1.59	26.82

45 HUGH M. SMITH; February 4, 1951; 1644 GCT; 4°05'N, 158°53'W; wind, 060°, 18 kt; weather, overcast; sea, rough; wire angle, 30°.

0	26.40	35.11	4.73	23.02
14	26.36	35.11	4.73	23.02
67	26.28	35.07	4.73	23.02
127	26.10	35.16	4.52	23.14
255	10.46	34.66	1.37	26.63
391	8.78	34.64	1.58	26.89

46 HUGH M. SMITH; February 6, 1951; 1420 GCT; 3°03'N, 159°10'W; wind, 090°, 16 kt; weather, partly cloudy; sea, rough; wire angle, 46°.

0	26.40	35.11	4.70	23.00
11	26.44	35.10	4.73	22.99
50	26.30	35.09	4.71	23.03
92	25.94	35.10	4.72	23.15
159	16.64	34.77	2.59	25.44
264	10.00	34.70	2.56	26.74

47 HUGH M. SMITH; February 6, 1951; 2322 GCT; 1°57'N, 159°39'W; wind, 100°, 15 kt; weather, partly cloudy; sea, rough; wire angle, 43°.

0	26.20	35.11	4.69	23.09
10	26.14	35.12	4.71	23.10
52	25.96	35.12	4.68	23.16
98	25.04	35.09	4.18	23.42
193	11.16	34.72	2.51	26.55
311	10.22	34.75	1.66	26.74

	OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
	Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
	m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
48	HUGH M. SMITH; February 7, 1951; 0808 GCT; 3°00'N, 159°47'W; wind, 080°, 15 kt; weather, partly cloudy; sea, rough; wire angle, 44°.											
	0	26.30	35.13	4.74		23.06						
	11	26.31	35.10	4.74		23.03						
	48	26.24	35.10	4.73		23.05						
	88	26.12	35.10	4.72		23.09						
	170	15.70	34.71	2.55		25.61						
	266	10.05	34.81	1.68		26.81						
49	HUGH M. SMITH; February 7, 1951; 1625 GCT; 4°06'N, 160°06'W; wind, 080°, 18 kt; weather, overcast; sea, rough; wire angle, 26°.											
	0	26.40	35.27	4.66		23.13						
	13	26.43	35.19	4.69		23.06						
	65	26.41	35.20	4.69		23.08						
	130	26.18	35.18	4.65		23.13						
	269	9.59	34.65	2.42		26.77						
	408	8.59	34.62	1.76		26.91						
50	HUGH M. SMITH; February 8, 1951; 0523 GCT; 4°58'N, 160°36'W; wind, 070°, 18 kt; weather, partly cloudy; sea, rough; wire angle, 16°.											
	3	27.33	34.94	-		22.59						
	12	27.34	34.91	4.72		22.56						
	59	27.28	34.92	4.71		22.59						
	117	26.24	34.90	4.45		22.90						
	232	10.46	34.64	1.30		26.61						
	351	8.90	34.65	1.64		26.88						
51	HUGH M. SMITH; February 8, 1951; 1250 GCT; 5°57'N, 160°53'W; wind, 060°, 19 kt; weather, partly cloudy; sea, rough; wire angle, 11°.											
	3	27.19	34.90	4.73		22.60						
	13	27.22	34.87	4.73		22.57						
	61	27.22	34.90	4.71		22.60						
	121	25.28	35.11	4.17		23.36						
	235	9.90	34.67	1.30		26.73						
	355	8.77	34.63	1.63		26.89						
52	HUGH M. SMITH; February 8, 1951; 2110 GCT; 6°59'N, 161°12'W; wind, 050°, 19 kt; weather, cloudy; sea, very rough; wire angle, missing.											
	6	26.96	35.05	4.69		22.79						
	16	26.96	35.05	4.69		22.79						
	66	26.94	35.05	4.69		22.79						
	125	20.32	34.86	3.67		24.59						
	241	10.68	34.68	0.58		26.60						
	356	8.92	34.65	1.07		26.88						
53	HUGH M. SMITH; February 9, 1951; 0450 GCT; 5°55'N, 161°27'W; wind, 080°, 19 kt; weather, intermittent heavy rain; sea, very rough; wire angle, 21°.											
	2	27.18	34.96	4.72		22.65						
	12	27.20	34.94	4.74		22.63						
	58	27.02	35.01	4.71		22.74						
	114	25.33	35.05	4.13		23.30						
	225	11.00	34.61	1.04		26.49						
	342	9.09	34.62	1.52		26.83						
54	HUGH M. SMITH; February 9, 1951; 1523 GCT; 4°52'N, 161°48'W; wind, 080°, 22 kt; weather, partly cloudy; sea, very rough; wire angle, 23°.											
	0	27.20	34.96	4.73		22.66						
	14	27.16	34.97	4.71		22.67						
	69	27.15	34.96	4.69		22.66						
	141	24.64	35.00	3.97		23.47						
	281	9.62	34.64	1.70		26.75						
	419	8.75	34.63	1.61		26.89						

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m	
HUGH M. SMITH; February 9, 1951; 2230 GCT; 3°58'N, 162°02'W; wind, 090°, 20 kt; weather, partly cloudy; sea, very rough; wire angle, 42°.												55
0	27.20	35.00	4.67		22.67							
12	27.22	35.02	4.67		22.68							
54	27.12	35.07	4.65		22.76							
113	26.40	35.19	4.66		23.07							
224	10.60	34.69	1.28		26.62							
343	8.95	34.64	1.79		26.86							
HUGH M. SMITH; February 10, 1951; 0607 GCT; 2°58'N, 162°25'W; wind, 090°, 14 kt; weather, cloudy; sea, very rough; wire angle, 52°.												56
0	26.40	35.21	4.76		23.07							
10	26.44	35.19	4.77		23.06							
43	26.16	35.17	4.78		23.13							
80	25.83	35.14	4.77		23.21							
147	25.56	35.15	4.74		23.30							
226	10.80	34.78	2.45		26.66							
HUGH M. SMITH; February 10, 1951; 1349 GCT; 2°00'N, 162°57'W; wind, 120°, 17 kt; weather, partly cloudy; sea, very rough; wire angle, 45°.												57
0	25.50	35.12	4.78		23.29							
11	25.54	35.12	4.80		23.29							
49	25.54	35.10	4.77		23.27							
92	25.46	35.13	4.74		23.32							
173	16.16	34.75	2.62		25.54							
266	10.53	34.77	2.15		26.70							
HUGH M. SMITH; February 10, 1951; 2223 GCT; 3°08'N, 163°15'W; wind, 100°, 20 kt; weather, intermittent slight drizzle; sea, very rough; wire angle, 43°.												58
0	25.90	35.13	4.87		23.19							
11	25.88	35.10	4.85		23.16							
49	25.77	35.12	4.84		23.21							
90	25.68	35.14	4.85		23.26							
169	23.36	35.07	3.91		23.91							
262	10.12	34.73	2.51		26.74							
HUGH M. SMITH; February 11, 1951; 0540 GCT; 4°02'N, 163°58'W; wind, 100°, 13 kt; weather, cloudy; sea, very rough; wire angle, 36°.												59
0	26.10	35.13	4.81		23.13							
12	26.08	35.14	4.81		23.14							
56	25.88	35.20	4.79		23.24							
113	25.91	35.21	4.74		23.24							
235	10.56	34.64	1.64		26.59							
364	8.84	34.66	1.91		26.90							
HUGH M. SMITH; February 11, 1951; 1253 GCT; 4°57'N, 164°32'W; wind, 080°, 10 kt; weather, partly cloudy; sea, very rough; wire angle, 08°.												60
0	26.90	35.04	4.71		22.78							
15	27.00	35.10	4.70		22.81							
75	27.00	35.11	4.67		22.82							
151	23.45	35.04	3.69		23.85							
299	9.63	34.70	1.56		26.80							
439	8.43	34.64	1.20		26.95							
HUGH M. SMITH; February 11, 1951; 2051 GCT; 5°56'N, 165°05'W; wind, 100°, 14 kt; weather, overcast; sea, very rough; wire angle, 20°.												61
0	27.20	34.66	4.70		22.42							
10	27.22	34.56	4.72		22.34							
58	27.04	34.88	4.57		22.64							
113	25.90	35.09	4.11		23.15							
228	11.72	34.63	1.30		26.37							
343	9.17	34.66	1.37		26.85							

HBL

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OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
62	HUGH M. SMITH; February 12, 1951; 0310 GCT; 6°44'N, 165°23'W; wind, 070°, 24 kt; weather, intermittent slight rain; sea, high; wire angle, <05°.										
6	27.21	34.85	4.74		22.56	0	(27.20)	(34.85)	(22.56)	(529)	(0.00)
16	27.22	34.82	4.72		22.54	10	27.21	34.84	22.55	530	0.05
36	27.24	34.87	4.70		22.56	20	27.22	34.84	22.55	531	0.11
67	27.24	34.83	4.65		22.53	30	27.23	34.85	22.55	530	0.16
127	23.82	35.06	3.78		23.76	50	27.24	34.85	22.55	530	0.27
244	10.43	34.68	0.66		26.65	75	27.23	34.85	22.55	530	0.40
363	8.98	34.62	1.14		26.84	100	26.97	34.96	22.72	514	0.53
476	7.98	34.55	0.97		26.94	150	22.12	34.97	24.18	375	0.76
588	6.96	34.56	0.87		27.10	200	12.75	34.58	26.14	189	0.90
701	6.10	34.49	1.11		27.16	250	10.32	34.68	26.67	138	0.98
934	4.86	34.51	1.39		27.33	300	9.66	34.66	26.76	129	1.05
1151	4.06	34.52	1.72		27.42	400	8.65	34.60	26.88	118	1.18
1369	3.42	34.55	1.90		27.51	500	7.75	34.55	26.98	109	1.30
						600	6.86	34.55	27.10	97	1.42
						700	6.10	34.49	27.16	92	1.52
						800	5.52	34.49	27.23	85	1.62
						1000	4.59	34.51	27.36	73	1.80
63	HUGH M. SMITH; February 12, 1951; 1040 GCT; 5°51'N, 165°28'W; wind, 090°, 19 kt; weather, intermittent slight drizzle; sea, very rough; wire angle, 18°.										
0	27.20	34.72	4.67		22.46	0	27.20	34.72	22.46	539	0.00
9	27.20	34.75	4.68		22.49	10	27.20	34.74	22.48	537	0.05
29	27.22	34.70	4.68		22.45	20	27.21	34.72	22.46	539	0.11
57	27.16	34.91	4.60		22.62	30	27.22	34.70	22.44	541	0.16
116	25.92	35.07	4.08		23.13	50	27.18	34.84	22.56	529	0.27
233	11.54	34.60	1.55		26.38	75	27.07	34.95	22.68	518	0.40
341	9.48	34.72	1.39		26.84	100	26.86	35.00	22.78	508	0.53
454	8.32	34.63	1.17		26.95	150	24.26	35.06	23.63	427	0.77
565	7.20	34.58	0.86		27.08	200	14.78	34.64	25.76	224	0.93
674	6.35	34.52	0.95		27.15	250	11.08	34.65	26.51	154	1.03
899	4.86	34.52	1.45		27.33	300	10.10	34.72	26.74	132	1.10
1116	4.10	34.52	1.61		27.42	400	8.88	34.67	26.90	116	1.24
1324	3.49	34.59	1.88		27.53	500	7.83	34.61	27.01	106	1.35
						600	6.93	34.56	27.10	97	1.46
						700	6.20	34.52	27.17	91	1.57
						800	5.48	34.52	27.26	82	1.66
						1000	4.43	34.52	27.38	71	1.84
64	HUGH M. SMITH; February 12, 1951; 1825 GCT; 4°58'N, 165°35'W; wind, 060°, 18 kt; weather, overcast; sea, very rough; wire angle, 20°.										
0	26.90	35.12	4.71		22.86	0	26.90	35.12	22.86	501	0.00
9	26.89	35.07	4.69		22.83	10	26.89	35.08	22.83	504	0.05
28	26.90	35.10	4.71		22.85	20	26.89	35.09	22.84	502	0.10
58	26.91	35.13	4.67		22.87	30	26.90	35.11	22.85	501	0.15
115	26.28	35.17	4.34		23.09	50	26.91	35.12	22.86	501	0.25
227	13.19	34.51	2.48		26.00	75	26.90	35.14	22.88	499	0.38
337	9.30	34.68	1.06		26.84	100	26.83	35.14	22.90	497	0.50
444	8.38	34.60	1.10		26.92	150	26.18	35.17	23.13	475	0.75
554	7.38	34.59	1.10		27.06	200	18.90	34.81	24.92	304	0.95
663	6.46	34.52	1.17		27.14	250	12.10	34.50	26.20	182	1.07
882	5.03	34.53	1.30		27.32	300	10.08	34.69	26.72	134	1.15
882	5.22	34.53	-		27.30	400	8.75	34.62	26.88	118	1.29
1097	4.11	34.54	1.63		27.43	500	7.88	34.60	27.00	107	1.41
1308	3.48	34.56	1.84		27.51	600	6.99	34.56	27.09	98	1.52
						700	6.20	34.51	27.16	91	1.62
						800	5.59	34.52	27.25	84	1.72
						1000	4.54	34.54	27.38	70	1.89

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; February 13, 1951; 0235 GCT; 3°59'N, 166°01'W; wind, 090°, 17 kt; weather, cloudy; sea, rough; wire angle, 40°.											65
0	27.10	35.19	4.71		22.85	0	27.10	35.19	22.85	502	0.00
9	27.09	-	-		-	10	27.08	35.14	22.82	505	0.05
23	27.04	35.10	4.72		22.80	20	27.05	35.11	22.81	506	0.10
45	26.98	35.12	4.71		22.83	30	27.02	35.10	22.81	506	0.15
86	26.43	35.21	4.56		23.08	50	26.89	35.15	22.89	498	0.25
159	25.28	35.13	4.72		23.37	75	26.52	35.20	23.04	483	0.38
232a)	12.60	34.83	2.95		26.36	100	26.40	35.20	23.08	480	0.50
301	9.48	34.69	1.96		26.82	150	25.40	35.14	23.35	454	0.73
374	8.91	34.60	1.77		26.84	200	17.95	34.78	25.13	284	0.92
446	8.46	34.60	1.87		26.91	250	11.41	34.56	26.38	166	1.04
593	7.34	34.55	1.20		27.04	300	9.51	34.69	26.81	125	1.11
752	5.99	34.52	1.45		27.20	400	8.74	34.60	26.87	119	1.24
934	4.85	34.54	1.71		27.35	500	8.06	34.58	26.96	111	1.36
						600	7.30	34.55	27.04	103	1.48
						700	6.40	34.53	27.15	92	1.59
						800	5.65	34.52	27.24	84	1.69
						1000	(4.55)	(34.56)	(27.40)	(69)	(1.86)
HUGH M. SMITH; February 13, 1951; 1118 GCT; 3°00'N, 166°36'W; wind, 090°, 19 kt; weather, partly cloudy; sea, rough; wire angle, 57°.											66
0	26.40	35.26	4.77		23.13	0	26.40	35.26	23.13	476	0.00
10	26.42	35.27	-		23.13	10	26.42	35.27	23.13	475	0.05
21	26.42	35.25	-		23.11	20	26.42	35.25	23.11	477	0.10
44	26.42	35.26	4.77		23.12	30	26.42	35.25	23.11	477	0.14
78	25.90	35.25	4.77		23.27	50	26.39	35.25	23.12	476	0.24
130	25.82	35.24	4.74		23.29	75	25.93	35.25	23.26	462	0.36
179a)	18.98	35.26	-		25.24	100	25.86	35.24	23.28	461	0.47
236	10.91	34.62	2.06		26.52	150	25.77	35.23	23.30	459	0.70
287	10.10	34.75	2.39		26.76	200	15.00	34.69	25.75	225	0.88
340	9.80	34.72	1.76		26.79	250	10.63	34.67	26.60	144	0.97
431	8.84	34.68	2.07		26.91	300	10.02	34.74	26.77	129	1.05
578	7.50	34.61	1.30		27.06	400	9.19	34.69	26.86	120	1.18
719	6.00	34.53	1.49		27.20	500	8.23	34.65	26.98	108	1.30
						600	7.29	34.60	27.08	99	1.41
						700	6.17	34.54	27.19	89	1.52
						800	(5.31)	(34.52)	(27.28)	(80)	(1.61)
						1000	(4.40)	(34.52)	(27.38)	(70)	(1.78)
HUGH M. SMITH; February 13, 1951; 1904 GCT; 2°04'N, 166°47'W; wind, 090°, 17 kt; weather, partly cloudy; sea, rough; wire angle, 55°.											67
0	25.65	35.22	4.74		23.33	0	25.60	35.22	23.33	455	0.00
9	25.67	-	-		-	10	25.67	35.22	23.32	456	0.05
21	25.66	-	4.77		-	20	25.66	35.21	23.32	457	0.09
44	25.67	35.20	4.73		23.30	30	25.66	35.21	23.32	457	0.14
86	25.66	35.19	4.75		23.30	50	25.67	35.20	23.31	458	0.23
156	23.91	-	4.77		-	75	25.66	35.19	23.30	459	0.34
221	10.94	34.77	2.58		26.63	100	25.66	35.19	23.30	459	0.46
289	10.45	34.76	1.70		26.71	150	25.30	35.18	23.41	449	0.69
357	10.00	34.73	1.87		26.76	200	11.86	34.62	26.34	169	0.85
433	9.24	34.67	1.49		26.84	250	10.72	34.77	26.67	138	0.93
581	7.37	34.57	1.46		27.05	300	10.40	34.76	26.71	134	1.00
735	5.82	34.56	1.54		27.25	400	9.61	34.69	26.80	126	1.13
946	4.52	34.52	1.93		27.37	500	8.40	34.62	26.94	113	1.26
						600	7.15	34.57	27.08	99	1.38
						700	6.14	34.56	27.21	87	1.48
						800	5.30	34.54	27.30	79	1.57
						1000	(4.34)	(34.52)	(27.39)	(70)	(1.74)

a) Point on T-S curve suggests bottle leaked on way up. Therefore, all values at this level except temperature are probably in error.

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
68	HUGH M. SMITH; February 14, 1951; 0344, 0641 GCT; 1°02'N, 167°02'W; wind, 090°, 15 kt; weather, partly cloudy; sea, rough; wire angle, 58°, 62°.										
0	25.90	35.24	4.82		23.27	0	25.90	35.24	23.27	462	0.00
9	25.95	35.21	4.81		23.23	10	25.95	35.21	23.23	466	0.05
19	25.90	35.20	4.86		23.24	20	25.90	35.20	23.24	465	0.09
39	25.74	35.21	4.82		23.29	30	25.80	35.21	23.28	461	0.14
70	25.64	35.19	4.74		23.31	50	25.70	35.21	23.31	458	0.23
121	24.45	35.11	4.37		23.61	75	25.63	35.19	23.31	458	0.35
172	17.06	34.79	2.95		25.36	100	24.80	35.14	23.53	437	0.46
221	12.19	34.73	2.97		26.36	150	21.27	34.97	24.42	352	0.66
270	11.50	34.83	2.74		26.57	200	13.15	34.68	26.13	189	0.80
338	10.51	34.78	1.76		26.71	250	11.76	34.81	26.51	154	0.88
						300	11.08	34.82	26.64	141	0.96
517	7.80	34.59	1.41		27.00	400	9.50	34.70	26.82	124	1.10
709	6.05	34.53	1.83		27.20	500	8.00	34.60	26.98	108	1.23
907	5.10	34.54	2.07		27.32	600	6.95	34.55	27.09	98	1.34
						700	6.12	34.54	27.20	88	1.44
						800	5.50	34.54	27.27	81	1.54
						1000	(4.94)	(34.54)	(27.34)	(74)	(1.71)
69	HUGH M. SMITH; February 14, 1951; 1256 GCT; 0°01'N, 167°23'W; wind, 100°, 15 kt; weather, partly cloudy; sea, rough; wire angle, 58°.										
0	25.50	35.26	4.70		23.41	0	25.50	35.26	23.41	449	0.00
9	25.48	35.26	4.72		23.41	10	25.48	35.26	23.41	448	0.04
19	25.50	35.26	4.73		23.40	20	25.50	35.26	23.41	449	0.09
40	25.45	35.27	4.73		23.43	30	25.48	35.26	23.41	448	0.14
67	25.32	35.26	4.65		23.46	50	25.40	35.27	23.44	445	0.22
117	24.82	35.26	4.21		23.61	75	25.28	35.26	23.47	442	0.34
165	22.99	35.81	3.34		24.57	100	25.07	35.26	23.54	436	0.45
220	14.59	35.16	3.19		26.20	150	22.94	35.38	24.26	367	0.65
281	11.66	34.88	2.97		26.58	200	16.70	35.35	25.87	214	0.80
347	10.58	34.78	1.86		26.70	250	12.80	34.99	26.44	160	0.90
485	8.39	34.63	1.61		26.94	300	11.30	34.85	26.62	143	0.97
625	6.78	34.54	1.70		27.11	400	9.70	34.71	26.80	126	1.12
798	5.36	34.52	2.05		27.27	500	8.19	34.61	26.96	110	1.24
						600	7.04	34.54	27.07	100	1.36
						700	6.06	34.53	27.20	88	1.46
						800	(5.31)	(34.52)	(27.28)	(80)	(1.55)
						1000	(4.35)	(34.52)	(27.39)	(70)	(1.72)
70	HUGH M. SMITH; February 14, 1951; 2112, 2158 GCT; 1°05'S, 167°36'W; wind, 090°, 15 kt; weather, cloudy; sea, rough; wire angle, 44°, 56°.										
0	25.85	35.39	4.65		23.40	0	25.80	35.39	23.40	448	0.00
12	25.84	35.39	4.67		23.40	10	25.84	35.39	23.40	450	0.04
26	25.84	35.38	4.67		23.39	20	25.84	35.38	23.39	450	0.09
52	25.82	35.36	4.75		23.38	30	25.84	35.38	23.39	450	0.14
100	25.82	35.37	4.70		23.39	50	25.82	35.36	23.38	451	0.23
189	16.46	35.32	2.70		25.91	75	25.82	35.36	23.38	451	0.34
278	11.52	34.85	2.69		26.58	100	25.82	35.37	23.39	450	0.45
377	10.13	34.75	2.07		26.75	150	25.30	35.44	23.60	430	0.68
470	8.76	34.65	1.52		26.90	200	15.25	35.20	26.09	193	0.83
571	7.64	34.57	1.90		27.01	250	12.01	34.90	26.53	151	0.92
771	5.95	34.52	1.92		27.20	300	11.22	34.82	26.61	143	1.00
						400	9.81	34.72	26.79	127	1.14
977	4.72	34.49	2.24		27.32	500	8.38	34.62	26.94	113	1.27
1195	3.85	34.52	1.83		27.44	600	7.40	34.56	27.04	103	1.39
						700	6.54	34.54	27.14	93	1.50
						800	5.76	34.51	27.22	86	1.60
						1000	4.60	34.49	27.34	75	1.78

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ_T cl/ton	ΔD dyn m	
HUGH M. SMITH; February 15, 1951; 0525 GCT; 2°01'S, 167°42'W; wind, 070°, 17 kt; weather, cloudy; sea, rough; wire angle, 55°.												71
0	26.00	35.24	4.82		23.24	0	26.00	35.24	23.24	465	0.00	
11	25.98	35.22	4.84		23.23	10	25.98	35.22	23.23	466	0.05	
21	25.94	-	4.84		-	20	25.95	35.23	23.24	464	0.09	
42	25.92	35.26	4.82		23.28	30	25.93	35.24	23.26	463	0.14	
76	25.90	35.25	4.83		23.27	50	25.92	35.26	23.28	461	0.23	
130	25.61	35.26	4.61		23.37	75	25.90	35.25	23.27	461	0.35	
178	21.02	35.72	3.37		25.05	100	25.84	35.25	23.29	460	0.46	
229	12.86	35.23a)	2.71		26.62a)	150	25.42	35.33	23.48	442	0.69	
275	10.62	34.79	2.47		26.70	200	15.58	35.20	26.01	200	0.86	
329	10.12	34.71	1.78		26.73	250	11.30	34.86	26.63	142	0.94	
435	9.30	34.67	1.68		26.83	300	10.38	34.74	26.70	135	1.02	
547	8.09	34.60	1.91		26.97	400	9.60	34.69	26.80	126	1.15	
693	6.46	34.54	1.99		27.15	500	8.64	34.63	26.91	116	1.28	
						600	7.41	34.57	27.04	103	1.40	
						700	(6.40)	(34.54)	(27.16)	(92)	(1.51)	
						800	(5.67)	(34.51)	(27.23)	(85)	(1.61)	
						1000	(4.60)	(34.49)	(27.34)	(75)	(1.79)	
HUGH M. SMITH; February 15, 1951; 1339 GCT; 3°05'S, 167°50'W; wind, 100°, 16 kt; weather, partly cloudy; sea, rough; wire angle, 41°.												72
0	26.40	35.39	4.80		23.22	0	26.40	35.39	23.22	466	0.00	
12	26.37	35.39	4.79		23.23	10	26.37	35.39	23.23	465	0.05	
27	26.38	35.41	4.79		23.24	20	26.37	35.40	23.24	464	0.09	
55	26.34	35.41	4.74		23.26	30	26.37	35.41	23.25	464	0.14	
108	26.12	35.38	4.76		23.30	50	26.35	35.41	23.25	463	0.23	
211	18.89	35.52	2.88		25.46	75	26.34	35.41	23.26	463	0.35	
294	10.71	34.81	2.63		26.70	100	26.22	35.40	23.29	460	0.46	
399	9.18	34.69	1.98		26.87	150	25.92	35.52	23.47	443	0.69	
399	9.24	34.69	-		26.86	200	20.00	35.63	25.26	272	0.88	
499	8.47	34.64	1.80		26.94	250	14.01	35.05	26.24	179	0.99	
612	7.24	34.57	1.68		27.07	300	10.55	34.79	26.71	134	1.07	
844	5.16	34.51	2.16		27.29	400	9.20	34.69	26.86	120	1.21	
1090	4.14	34.52	2.29		27.41	500	8.47	34.64	26.94	112	1.33	
1354	3.39	34.55	2.60		27.51	600	7.39	34.58	27.05	102	1.45	
						700	6.35	34.53	27.16	92	1.56	
						800	5.50	34.51	27.25	83	1.65	
						1000	4.48	34.51	27.37	72	1.83	
HUGH M. SMITH; February 15, 1951; 2106 GCT; 4°00'S, 167°58'W; wind, 090°, 15 kt; weather, partly cloudy; sea, rough; wire angle, 30°.												73
0	26.90	35.56	4.74		23.19	0	26.90	35.56	23.19	469	0.00	
8	26.86	35.55	4.75		23.20	10	26.86	35.55	23.20	468	0.05	
25	26.88	35.56	4.76		23.20	20	26.87	35.56	23.20	468	0.09	
50	26.88	35.57	4.73		23.21	30	26.88	35.56	23.20	468	0.14	
100	26.88	35.58	4.74		23.21	50	26.88	35.57	23.21	468	0.24	
193	21.42	35.95	3.55		25.12	75	26.88	35.58	23.21	467	0.35	
278	11.68	34.89	2.16		26.58	100	26.88	35.58	23.21	467	0.47	
366	9.44	34.73	1.89		26.86	150	26.62	35.62	23.33	456	0.70	
460	8.40	34.66	1.93		26.96	200	20.80	35.88	25.24	274	0.89	
552	7.42	34.61	1.75		27.07	250	13.50	35.04	26.34	170	1.00	
743	5.76	34.53	2.16		27.23	300	10.88	34.83	26.68	137	1.08	
932	4.72	34.52	2.33		27.35	400	9.00	34.70	26.90	116	1.22	
1124	4.06	34.54	2.44		27.44	500	8.00	34.64	27.01	106	1.34	
						600	6.93	34.58	27.12	95	1.45	
						700	6.07	34.54	27.20	87	1.55	
						800	5.41	34.53	27.28	81	1.64	
						1000	4.42	34.53	27.39	70	1.81	

a) Anomalous value.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
74	HUGH M. SMITH; February 16, 1951; 0445 GCT; 5°03'S, 168°09'W; wind, 090°, 13 kt; weather, cloudy; sea, rough; wire angle, 35°.										
0	27.52	35.69	4.65		23.09	0	27.50	35.69	23.10	478	0.00
9	27.54	25.69	4.65		23.08	10	27.54	35.69	23.08	480	0.05
25	27.42	35.69	4.66		23.12	20	27.47	35.69	23.11	477	0.10
48	27.38	35.69	4.66		23.14	30	27.41	35.69	23.13	475	0.14
94	27.36	35.68	4.64		23.14	50	27.38	35.69	23.14	474	0.24
179	24.23	36.17	3.67		24.48	75	27.38	35.68	23.13	475	0.36
261	13.26	35.01	2.17		26.37	100	27.36	35.68	23.14	474	0.48
340	9.66	34.75	2.29		26.83	150	27.03	35.72	23.27	461	0.72
423	8.95	34.66	2.18		26.88	200	22.26	36.06	24.97	300	0.91
505	7.98	34.61	1.83		26.99	250	14.50	35.14	26.21	182	1.04
687	6.42	34.54	1.70		27.16	300	10.90	34.83	26.68	137	1.12
871	5.38	34.54	2.07		27.29	400	9.18	34.68	26.86	120	1.26
1060	4.55	34.52	2.28		27.37	500	8.06	34.61	26.98	109	1.38
						600	7.06	34.56	27.08	99	1.49
						700	6.34	34.54	27.17	91	1.60
						800	5.74	34.54	27.24	84	1.70
						1000	4.81	34.53	27.35	74	1.88
75	HUGH M. SMITH; February 16, 1951; 1225 GCT; 5°59'S, 168°29'W; wind, 090°, 10 kt; weather, cloudy; sea, moderate; wire angle, 25°.										
0	27.40	35.71	4.69		23.13	0	27.40	35.71	23.13	474	0.00
9	27.50	35.70	4.70		23.10	10	27.50	35.70	23.10	477	0.05
27	27.51	35.71	4.72		23.11	20	27.50	35.70	23.10	477	0.10
54	27.45	35.69	4.82		23.11	30	27.51	35.71	23.11	477	0.14
108	27.42	35.70	4.73		23.13	50	27.47	35.69	23.11	477	0.24
202	24.23	36.07	3.74		24.41	75	27.43	35.69	23.12	476	0.36
298	12.20	34.89	2.17		26.48	100	27.42	35.70	23.13	475	0.48
392	9.37	34.70	2.46		26.84	150	27.32	35.72	23.18	470	0.72
392	9.45	34.70	-		26.83	200	24.70	36.03	24.23	370	0.93
492	7.54	34.57	2.92		27.03	250	19.18	35.65	25.49	250	1.09
591	6.60	34.51	3.01		27.11	300	12.02	34.88	26.51	153	1.20
800	5.25	34.49	2.76		27.26	400	9.21	34.69	26.86	120	1.34
1005	4.31	34.52	2.42		27.39	500	7.45	34.57	27.04	103	1.46
1005	4.25	34.52	-		27.40	600	6.51	34.50	27.11	96	1.57
1209	3.72	34.54	2.60		27.47	700	5.88	34.50	27.19	88	1.67
						800	5.25	34.49	27.26	82	1.76
						1000	4.31	34.52	27.39	70	1.94
76	HUGH M. SMITH; February 16, 1951; 2050 GCT; 7°04'S, 168°48'W; wind, 060°, 9 kt; weather, partly cloudy; sea, moderate; wire angle, 16°.										
4	27.61	35.63	4.69		23.02	0	(27.60)	(35.63)	(23.02)	(486)	(0.00)
14	27.56	35.65	4.76		23.05	10	27.59	35.64	23.03	485	0.05
28	27.55	35.65	4.69		23.05	20	27.55	35.65	23.05	483	0.10
57	27.52	35.66	4.67		23.07	30	27.55	35.65	23.05	483	0.14
109	27.43	35.64	4.67		23.08	50	27.54	35.66	23.06	482	0.24
210	24.04	36.13	3.56		24.51	75	27.47	35.65	23.05	480	0.36
312	14.62	35.08	2.72		26.14	100	27.45	35.64	23.08	480	0.48
420	9.16	34.65	2.44		26.84	150	26.40	35.79	23.52	438	0.72
420	9.22	34.65	-		26.83	200	25.30	35.98	24.01	391	0.93
520	7.70	34.58	2.89		27.01	250	20.38	35.81	25.30	269	1.10
622	6.44	34.51	2.81		27.13	300	15.83	35.20	25.96	206	1.22
826	5.06	34.49	2.56		27.29	400	9.63	34.69	26.79	126	1.40
1029	4.30	34.51	2.72		27.39	500	8.01	34.60	26.98	109	1.53
1232	3.62	34.54	2.88		27.48	600	6.72	34.53	27.11	96	1.64
						700	5.76	34.50	27.21	87	1.74
						800	5.18	34.49	27.27	81	1.83
						1000	4.42	34.50	27.37	72	2.01

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

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HUGH M. SMITH; February 27, 1951; 0555 GCT; 13°30'S, 171°51'W; wind, 080°, 12 kt; weather, overcast; sea, rough; wire angle, 10°.

5	29.13	35.04	4.54	0.40	22.07	0	(29.10)	(35.04)	(22.84)	(575)	(0.00)
15	29.07	35.03	4.56	0.42	22.09	10	29.09	35.04	22.08	575	0.06
29	28.96	35.06	4.57	0.44	22.14	20	28.98	35.04	22.12	571	0.12
58	28.77	35.16	4.51	0.42	22.28	30	28.93	35.06	22.15	568	0.17
112	27.26	35.56	4.65	0.55	23.08	50	28.82	35.13	22.24	560	0.28
215	21.64	35.92	3.75	0.56	25.03	75	28.14	35.34	22.63	523	0.42
316	15.96	35.28	3.36	1.01	25.99	100	27.30	35.55	23.06	482	0.55
316	15.90	35.28	-	-	26.00	150	26.02	35.80	23.65	425	0.78
423	10.01	34.64	2.85	1.78	26.69	200	23.02	36.03	24.73	322	0.97
528	7.50	34.52	3.16	2.06	26.99	250	20.15	35.77	25.33	266	1.12
631	6.18	34.48	3.41	2.26	27.14	300	16.90	35.40	25.86	215	1.25
834	4.91	34.49	3.19	2.21	27.30	400	11.08	34.73	26.57	148	1.44
1041	4.10	34.50	3.36	2.44	27.40	500	8.05	34.54	26.93	114	1.58
1244	3.46	34.53	3.18	2.60	27.49	600	6.51	34.49	27.10	97	1.69
						700	5.65	34.48	27.21	87	1.80
						800	5.08	34.48	27.28	80	1.89
						1000	4.28	34.49	27.37	71	2.06

78

HUGH M. SMITH; February 27, 1951; 2200 GCT; 11°55'S, 171°59'W; wind, 080°, 7 kt; weather, cloudy; sea, slight; wire angle, 19°.

4	28.89	35.00	4.57	0.32	22.12	0	(28.90)	(35.00)	(22.12)	(572)	(0.00)
13	28.82	35.05	4.54	0.50	22.18	10	28.83	35.05	22.18	566	0.06
13	-	-	-	0.26	-	20	28.82	35.05	22.18	566	0.11
27	28.83	35.05	4.54	0.25	22.18	30	28.83	35.05	22.18	566	0.17
50	28.82	35.07	4.49	0.30	22.20	50	28.82	35.07	22.20	564	0.28
97	28.10	35.68	4.60	0.35	22.89	75	28.67	35.21	22.35	549	0.42
187	22.84	36.06	3.68	0.58	24.80	100	27.92	35.76	23.01	486	0.55
272	17.92	35.53	3.66	0.83	25.71	150	25.88	36.02	23.86	405	0.78
364	12.94	34.89	3.25	1.49	26.34	200	22.10	35.98	24.95	301	0.96
455	9.04	34.60	2.85	2.15	26.82	250	19.00	35.64	25.53	247	1.10
550	7.33	34.52	3.19	2.27	27.02	300	16.45	35.35	25.93	208	1.22
738	5.57	34.46	3.37	2.43	27.20	400	11.15	34.72	26.55	150	1.41
924	4.56	34.51	3.23	2.58	27.36	500	8.10	34.56	26.93	113	1.55
1123	3.94	34.51	3.11	2.65	27.42	600	6.72	34.49	27.08	99	1.66
						700	5.80	34.47	27.18	90	1.77
						800	5.15	34.48	27.27	81	1.86
						1000	4.25	34.52	27.40	69	2.03

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HUGH M. SMITH; February 28, 1951; 1310 GCT; 9°51'S, 171°51'W; wind, 090°, 9 kt; weather, overcast; sea, slight; wire angle, 10°.

4	28.59	35.36	4.59	0.37	22.49	0	(28.60)	(35.36)	(22.49)	(536)	(0.00)
14	28.54	35.36	4.61	0.37	22.51	10	28.55	35.36	22.51	535	0.05
29	28.60	35.44	4.59	0.34	22.55	20	28.54	35.40	22.54	532	0.11
52	28.61	35.51	4.56	0.33	22.60	30	28.60	35.44	22.55	531	0.16
102	28.42	35.58	4.60	0.44	22.71	50	28.61	35.51	22.60	526	0.27
203	24.58	36.00	3.21	0.73	24.24	75	28.60	35.54	22.62	523	0.40
296	17.32	35.45	3.38	0.95	25.80	100	28.45	35.57	22.70	516	0.53
395	10.40	34.71	2.48	1.97	26.67	150	27.77	35.71	23.02	485	0.78
490	7.97	34.60	2.76	2.01	26.98	200	24.90	35.99	24.14	379	1.00
592	6.80	34.56	2.82	2.36	27.12	250	20.92	35.85	25.18	280	1.17
788	5.40	34.50	2.84	2.44	27.25	300	17.15	35.42	25.82	219	1.30
982	4.46	34.51	2.85	2.60	27.37	400	10.15	34.70	26.71	134	1.48
1188	3.64	34.56	2.91	2.57	27.49	500	7.81	34.59	27.00	107	1.61
						600	6.74	34.56	27.13	94	1.72
						700	6.00	34.52	27.19	88	1.82
						800	5.32	34.50	27.26	82	1.92
						1000	4.39	34.52	27.39	70	2.09

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
80	HUGH M. SMITH; March 1, 1951; 0438 GCT; 8°00'S, 171°56'W; wind, 040°, 15 kt; weather, partly cloudy; sea, moderate; wire angle, 27°.										
4	28.68	35.40	4.54	0.37	22.49	0	(28.70)	(35.40)	(22.49)	(537)	(0.00)
12	28.68	35.43	4.54	0.36	22.51	10	28.69	35.42	22.50	535	0.05
25	28.34	35.51	4.55	0.37	22.69	20	28.40	35.49	22.65	521	0.11
51	28.23	35.73a)	4.53	0.52	22.89a)	30	28.31	35.52	22.69	516	0.16
96	28.12	35.62	4.56	0.54	22.84	50	28.25	35.54	22.74	512	0.26
181	25.79	35.97	3.41	0.75	23.85	75	28.19	35.60	22.80	506	0.39
267b)	16.21	35.71	4.03	0.60	26.26	100	28.12	35.62	22.84	502	0.52
359	11.40	34.83	2.36	2.06	26.59	150	27.80	35.69	23.00	488	0.77
447	8.56	34.67	2.99	2.22	26.95	200	24.10	36.05	24.43	351	0.98
538	7.50	34.59	2.83	2.41	27.05	250	17.95	35.56	25.73	227	1.13
715	5.90	34.51	2.95	2.53	27.20	300	14.20	35.11	26.25	178	1.23
899	4.90	34.51	2.93	2.68	27.32	400	9.75	34.72	26.80	126	1.40
1089	4.19	34.53	2.87	2.76	27.41	500	7.90	34.62	27.01	106	1.52
						600	6.82	34.56	27.12	96	1.63
						700	6.00	34.52	27.19	88	1.73
						800	5.40	34.51	27.26	82	1.82
						1000	4.48	34.52	27.38	71	2.00
81	HUGH M. SMITH; March 1, 1951; 1304 GCT; 7°01'S, 171°54'W; wind, 030°, 14 kt; weather, cloudy; sea, moderate; wire angle, missing.										
0	28.50	35.38	4.59	0.38	22.54	0	28.50	35.38	22.54	532	0.00
10	28.48	35.39	4.61	0.38	22.55	10	28.48	35.39	22.55	530	0.05
26	28.50	35.41	4.60	0.48	22.56	20	28.50	35.40	22.55	530	0.11
54	28.18	35.57	4.54	0.49	22.78	30	28.50	35.42	22.57	529	0.16
107	28.04	35.65	4.57	0.61	22.89	50	28.18	35.57	22.79	508	0.26
208	23.27	36.12	3.54	0.77	24.72	75	28.09	35.61	22.84	502	0.39
314	13.04	35.01	2.47	1.75	26.41	100	28.05	35.62	22.87	500	0.52
420	9.44	34.70	2.36	2.25	26.83	150	27.37	35.80	23.22	466	0.76
523	7.79	34.57	2.61	2.30	26.99	200	24.62	36.10	24.31	362	0.97
629	6.62	34.52	2.87	2.28	27.11	250	19.25	35.73	25.53	246	1.13
834	5.14	34.50	2.70	2.53	27.29	300	14.02	35.12	26.29	174	1.24
1038	4.30	34.52	2.79	2.61	27.39	400	9.90	34.74	26.79	127	1.40
1241	3.48	34.55	2.85	2.58	27.50	500	8.09	34.59	26.96	110	1.53
						600	6.91	34.53	27.08	99	1.64
						700	6.01	34.51	27.19	89	1.75
						800	5.29	34.50	27.27	81	1.84
						1000	4.48	34.52	27.38	71	2.02
82	HUGH M. SMITH; March 1, 1951; 2147 GCT; 5°59'S, 172°00'W; wind, 050°, 16 kt; weather, partly cloudy; sea, moderate; wire angle, 35°.										
0	28.20	35.67	4.57	0.47	22.85	0	28.20	35.67	22.85	501	0.00
8	28.22	35.66	4.60	0.48	22.84	10	28.22	35.66	22.84	503	0.05
21	28.22	35.67	4.58	0.43	22.85	20	28.20	35.67	22.85	501	0.10
45	28.08	35.71	4.53	0.50	22.92	30	28.21	35.68	22.86	501	0.15
86	27.84	35.68	4.58	0.57	22.98	50	28.02	35.71	22.94	493	0.25
161	25.68	36.06	3.71	0.74	23.95	75	27.90	35.68	22.96	492	0.37
236b)	19.16	35.87	3.65	0.77	25.66	100	27.63	35.70	23.06	482	0.50
313	12.48	34.93	2.35	1.91	26.46	150	26.88	35.85	23.42	448	0.73
390	9.58	34.73	2.46	2.21	26.83	200	23.70	36.13	24.61	334	0.93
469	7.92	34.62	2.72	2.37	27.01	250	18.15	35.60	25.71	229	1.08
630	6.34	34.52	2.94	2.48	27.15	300	13.22	35.02	26.38	165	1.18
798	5.29	34.51	2.81	2.63	27.28	400	9.31	34.71	26.86	120	1.33
984	4.56	34.51	-	-	27.36	500	7.50	34.58	27.04	103	1.45
						600	6.52	34.53	27.14	94	1.56
						700	5.81	34.51	27.21	87	1.66
						800	5.28	34.51	27.28	81	1.75
						1000	(4.49)	(34.52)	(27.37)	(71)	(1.92)

a) Anomalous values.

b) Point on T-S curve suggests bottle leaked on way up. Therefore, all values at this level except temperature are probably in error.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; March 2, 1951; 0558 GCT; 5°00'S, 172°16'W; wind, 050°, 12 kt; weather, partly cloudy; sea, moderate; wire angle, 28°.											83
0	27.70	35.70	4.69	0.66	23.02	0	27.70	35.70	23.02	484	0.00
8	27.75	35.69	4.69	0.57	23.02	10	27.73	35.70	23.03	485	0.05
25	27.68	35.72	4.69	0.53	23.06	20	27.70	35.71	23.05	483	0.10
50	27.63	35.70	4.64	0.57	23.06	30	27.67	35.70	23.05	482	0.14
99	27.45	35.70	4.69	0.64	23.12	50	27.63	35.70	23.06	482	0.24
187	23.86	-	3.67	-	-	75	27.55	35.70	23.09	479	0.36
276a)	13.22	35.48	3.28	0.53	26.74	100	27.45	35.70	23.12	476	0.48
365	9.74	34.75	1.87	2.30	26.82	150	26.30	35.89	23.63	427	0.71
459	8.66	34.67	1.83	2.47	26.93	200	22.08	35.98	24.96	301	0.90
550	7.66	34.66	1.77	2.44	27.08	250	14.90	35.21	26.17	185	1.03
744	5.90	34.52	2.42	2.48	27.21	300	11.83	34.90	26.56	148	1.12
931	4.92	34.52	2.55	2.63	27.33	400	9.23	34.71	26.87	119	1.26
1125	4.16	34.54	2.47	2.60	27.43	500	8.19	34.66	27.00	107	1.38
						600	7.14	34.62	27.12	95	1.49
						700	6.29	34.54	27.17	90	1.60
						800	5.55	34.52	27.25	83	1.69
						1000	4.63	34.54	27.37	71	1.87
HUGH M. SMITH; March 2, 1951; 1800 GCT; 4°00'S, 172°06'W; wind, 040°, 10 kt; weather, partly cloudy; sea, moderate; wire angle, 19°.											84
0	27.20	35.60	4.68	0.77	23.13	0	27.20	35.60	23.13	475	0.00
10	27.27	35.61	4.67	0.62	23.11	10	27.27	35.61	23.11	476	0.05
24	27.27	35.61	4.68	0.58	23.11	20	27.27	35.61	23.11	476	0.10
52	27.25	35.61	4.63	0.64	23.12	30	27.26	35.61	23.11	476	0.14
102	27.10	35.56	4.67	0.67	23.13	50	27.25	35.61	23.12	476	0.24
198	22.64	34.28b)	3.58	0.76	23.51b)	75	27.20	35.58	23.11	477	0.36
295a)	11.53	35.15	2.19	1.60	26.81	100	27.09	35.56	23.13	475	0.48
396	9.12	34.69	2.18	2.35	26.88	150	26.81	35.63	23.27	461	0.71
492	8.30	34.63	1.93	2.50	26.96	200	22.10	35.93	24.92	305	0.91
589	7.20	34.56	1.85	2.68	27.07	250	13.06	35.03	26.42	162	1.03
779	5.70	34.51	2.03	2.77	27.22	300	11.38	34.87	26.62	143	1.11
974	4.62	34.52	2.22	2.83	27.36	400	9.10	34.69	26.88	118	1.25
1170	3.88	34.54	2.41	2.83	27.45	500	8.21	34.62	26.96	110	1.37
						600	7.10	34.56	27.08	99	1.48
						700	6.29	34.52	27.16	92	1.59
						800	5.58	34.51	27.24	84	1.69
						1000	4.49	34.53	27.38	70	1.86
HUGH M. SMITH; March 3, 1951; 0210 GCT; 3°00'S, 171°50'W; wind, 060°, 14 kt; weather, cloudy; sea, moderate; wire angle, 35°.											85
0	27.20	35.51	4.73	0.68	23.06	0	27.20	35.51	23.06	482	0.00
9	27.12	35.49	4.76	0.66	23.07	10	27.10	35.49	23.08	480	0.05
21	26.98	35.50	4.75	0.62	23.12	20	26.99	35.50	23.12	476	0.10
46	26.93	35.50	4.73	0.66	23.14	30	26.97	35.50	23.13	475	0.14
89	26.81	35.50	4.76	0.67	23.18	50	26.92	35.50	23.14	474	0.24
163	25.16	35.91	3.90	0.73	24.00	75	26.88	35.50	23.15	473	0.36
236a)	12.54	35.40	3.30	1.01	26.81	100	26.80	35.51	23.19	470	0.48
318	10.02	34.76	2.53	1.98	26.78	150	26.42	35.59	23.37	453	0.71
401	9.10	34.68	2.41	2.21	26.87	200	19.30	35.63	25.44	255	0.89
484	8.47	34.61	1.99	2.35	26.92	250	11.91	34.92	26.56	148	0.99
655	6.94	34.55	1.92	2.57	27.09	300	10.35	34.79	26.75	131	1.07
835	5.28	34.50	2.07	2.72	27.27	400	9.11	34.68	26.87	119	1.20
1024	4.35	34.55	2.27	2.76	27.41	500	8.31	34.60	26.93	113	1.32
						600	7.43	34.56	27.03	104	1.44
						700	6.51	34.53	27.14	94	1.55
						800	5.55	34.50	27.24	84	1.65
						1000	4.42	34.55	27.41	68	1.82

a) Point on T-S curve suggests bottle leaked on way up. Therefore, all values at this level except temperature are probably in error.

b) Anomalous values.

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
86	HUGH M. SMITH; March 4, 1951; 0234 GCT; 2°00'S, 172°02'W; wind, 080°, 14 kt; weather, cloudy; sea, moderate; wire angle, 40°.										
0	27.00	35.46	4.77	0.66	23.09	0	27.00	35.46	23.09	479	0.00
8	26.96	35.47	4.74	0.70	23.11	10	26.97	35.47	23.10	477	0.05
23	26.77	35.46	4.75	0.68	23.16	20	26.79	35.47	23.16	472	0.10
45	26.73	35.46	4.67	0.71	23.17	30	26.76	35.46	23.16	472	0.14
86	26.31	35.46	4.73	0.77	23.30	50	26.71	35.46	23.18	470	0.24
159	24.19	35.81	3.82	0.86	24.22	75	26.64	35.46	23.20	468	0.36
240a)	12.90	35.14	2.64	1.62	26.54	100	26.20	35.47	23.35	454	0.47
319	10.26	34.75	2.00	2.26	26.73	150	24.90	35.79	23.99	393	0.69
408	9.69	34.70	1.82	2.40	26.79	200	16.22	35.29	25.94	208	0.84
493	8.86	34.66	1.65	2.57	26.89	250	12.25	34.93	26.51	154	0.93
676	6.56	34.55	2.12	2.77	27.15	300	10.48	34.78	26.72	134	1.01
858	4.91	34.53	2.30	2.90	27.34	400	9.77	34.70	26.78	128	1.15
1054	4.16	34.56	2.28	2.92	27.44	500	8.79	34.65	26.90	116	1.28
						600	7.51	34.60	27.05	102	1.40
						700	6.29	34.55	27.18	90	1.50
						800	5.38	34.53	27.28	80	1.60
						1000	4.29	34.56	27.43	66	1.76
87	HUGH M. SMITH; March 4, 1951; 1105 GCT; 0°57'S, 172°00'W; wind, 080°, 12 kt; weather, cloudy; sea, moderate; wire angle, 47°.										
0	26.30	35.39	4.73	0.68	23.25	0	26.30	35.39	23.25	463	0.00
10	26.30	35.38	4.75	0.68	23.25	10	26.30	35.38	23.25	464	0.05
21	26.20	-	-	-	-	20	26.21	35.38	23.28	461	0.09
47	26.10	35.38	4.67	0.68	23.31	30	26.16	35.38	23.29	460	0.14
93	25.82	35.38	4.75	0.67	23.40	50	26.09	35.38	23.31	458	0.23
180	19.67	35.64	3.16	1.07	25.35	75	25.91	35.38	23.37	452	0.34
280a)	11.67	35.07	3.03	1.52	26.72	100	25.80	35.38	23.40	449	0.46
389	10.06	34.74	1.80	2.31	26.76	150	25.22	35.53	23.70	421	0.68
494	8.47	34.62	2.04	2.51	26.92	200	15.82	35.27	26.01	200	0.84
609	6.74	34.52	1.83	2.75	27.10	250	13.35	35.04	26.37	166	0.93
831	5.18	34.51	2.34	2.70	27.29	300	11.25	34.85	26.63	142	1.01
1059	4.21	34.53	2.27	2.78	27.41	400	9.87	34.72	26.78	128	1.16
1339	3.21	34.56	2.31	2.80	27.53	500	8.40	34.61	26.93	114	1.28
						600	6.86	34.53	27.09	98	1.40
						700	5.92	34.51	27.20	88	1.50
						800	5.30	34.51	27.27	81	1.60
						1000	4.46	34.52	27.38	71	1.77
88	HUGH M. SMITH; March 4, 1951; 1950 GCT; 0°09'N, 171°58'W; wind, 140°, 8 kt; weather, partly cloudy; sea, moderate; wire angle, 52°.										
0	26.00	35.34	4.69	0.68	23.31	0	26.00	35.34	23.31	458	0.00
10	26.06	35.37	4.74	0.77	23.31	10	26.06	35.37	23.31	457	0.05
22	26.02	-	-	-	-	20	26.02	35.36	23.32	457	0.09
44	25.95	35.34	4.61	0.78	23.32	30	26.00	35.34	23.31	458	0.14
83	25.68	35.37	-	-	23.43	50	25.92	35.34	23.34	456	0.23
159	22.40	35.24	3.53	1.01	24.31	75	25.73	35.37	23.42	448	0.34
246	14.17	35.06	3.34	1.37	26.22	100	25.50	35.37	23.49	441	0.45
345	10.97	34.82	2.42	2.08	26.66	150	23.30	35.32	24.11	382	0.66
441	8.82	34.71	1.52	2.50	26.94	200	16.39	35.16	25.80	221	0.82
552	7.52	34.62	1.95	2.63	27.07	250	14.05	35.03	26.22	181	0.92
773	5.52	34.55	2.03	2.85	27.28	300	12.38	34.91	26.46	158	1.01
1004	4.32	34.58	2.14	2.92	27.44	400	9.61	34.74	26.83	122	1.16
1268	3.46	34.59	2.19	2.92	27.54	500	8.12	34.66	27.01	106	1.28
						600	7.01	34.58	27.11	96	1.39
						700	6.09	34.56	27.21	86	1.49
						800	5.37	34.56	27.30	78	1.58
						1000	4.37	34.58	27.43	66	1.74

a) Point on T-S curve suggests bottle leaked on way up. Therefore, all values at this level except temperature are probably in error.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; March 5, 1951; 0323 GCT; 1°04'N, 172°00'W; wind, 040°, 9 kt; weather, partly cloudy; sea, moderate; wire angle, 60°. 89

0	26.70	35.24	4.81	0.62	23.02	0	26.70	35.24	23.02	486	
9	26.20	35.25	4.83	0.66	23.18	10	26.20	35.25	23.18	470	
18	26.10	-	-	-	-	20	26.07	35.25	23.22	466	
38	25.95	35.26	4.80	0.61	23.26	30	26.00	35.26	23.25	464	
67	25.88	-	-	-	-	50	25.91	35.27	23.29	460	
112	25.77	35.30	4.61	0.66	23.35	75	25.86	35.27	23.30	459	
149	22.00	35.24	4.81	0.67	24.42	100	25.80	35.29	23.34	456	
191	14.00	34.72	3.14	1.41	25.99	150	21.50	35.21	24.54	341	
238	12.34	34.67	3.00	1.62	26.29	200	13.52	34.69	26.07	196	
302	11.07	34.78	2.54	1.86	26.61	250	12.02	34.69	26.36	167	
427	9.45	34.70	1.56	2.31	26.83	300	11.10	34.78	26.61	144	
544	7.65	34.59	1.63	2.61	27.02	400	9.85	34.72	26.78	128	
704	6.25	34.54	1.86	2.62	27.18	500	8.25	34.62	26.96	111	
						600	7.09	34.56	27.08	99	
						700	6.24	34.54	27.18	90	

HUGH M. SMITH; March 5, 1951; 1050 GCT; 1°54'N, 172°02'W; wind, 080°, 10 kt; weather, intermittent moderate rain; sea, moderate; wire angle, 36°. 90

0	26.40	35.22	4.86	0.67	23.10	0	26.40	35.22	23.10	478	0.00
12	26.34	35.22	4.86	0.68	23.11	10	26.38	35.22	23.10	478	0.05
28	26.22	35.21	4.84	0.61	23.14	20	26.29	35.22	23.13	475	0.10
59	26.13	35.25	4.78	0.70	23.20	30	26.22	35.21	23.14	474	0.14
118	26.00	35.22	4.63	0.76	23.22	50	26.15	35.24	23.19	470	0.24
226	11.97	34.80	2.95	1.71	26.46	75	26.08	35.23	23.20	468	0.36
329	10.38	34.75	1.77	2.27	26.71	100	26.02	35.22	23.21	467	0.47
448	9.66	34.70	1.60	2.41	26.80	150	25.93	35.23	23.25	464	0.71
561	7.76	34.59	2.08	2.53	27.01	200	14.05	34.72	25.98	204	0.88
685	6.60	34.53	1.66	2.81	27.12	250	11.48	34.80	26.55	149	0.97
934	4.59	34.53	2.06	2.90	27.37	300	10.70	34.76	26.66	139	1.04
1200	3.58	34.56	2.20	2.96	27.50	400	10.01	34.72	26.75	130	1.19
1469	2.96	34.61	2.40	2.90	27.60	500	8.71	34.65	26.91	115	1.32
						600	7.39	34.56	27.04	103	1.44
						700	6.46	34.52	27.14	94	1.55
						800	5.53	34.52	27.25	83	1.64
						1000	4.31	34.54	27.41	68	1.81

HUGH M. SMITH; March 5, 1951; 1858 GCT; 2°48'N, 172°04'W; wind, 100°, 17 kt; weather, cloudy; sea, rough; wire angle, 52°. 91

0	26.50	35.22	4.77	0.61	23.06	0	26.50	35.22	23.06	481	0.00
9	26.54	35.22	4.78	0.60	23.05	10	26.53	35.21	23.05	483	0.05
19	26.54	35.22	4.76	0.56	23.05	20	26.53	35.21	23.05	483	0.10
40	26.52	35.21	4.76	0.61	23.05	30	26.52	35.21	23.05	482	0.14
77	26.38	35.21	4.72	0.60	23.09	50	26.45	35.21	23.07	481	0.24
140	25.38	35.16	4.33	0.67	23.37	75	26.38	35.21	23.09	479	0.36
192a)	12.03	35.19	4.64	0.76	26.75	100	26.24	35.21	23.14	474	0.48
251	10.64	34.74	2.51	1.97	26.65	150	24.21	35.13	23.70	421	0.71
311	10.26	34.74	1.69	2.28	26.72	200	11.70	34.75	26.47	157	0.86
382	9.70	34.70	1.57	2.44	26.79	250	10.66	34.75	26.66	139	0.93
541	8.09	34.61	1.91	2.50	26.98	300	10.36	34.74	26.71	134	1.00
736	6.00	34.56	1.46	2.82	27.23	400	9.52	34.68	26.80	126	1.14
957	4.53	34.53	1.95	2.88	27.38	500	8.51	34.63	26.93	114	1.27
						600	7.45	34.59	27.05	102	1.39
						700	6.38	34.57	27.19	89	1.49
						800	5.50	34.55	27.28	80	1.59
						1000	(4.40)	(34.53)	(27.39)	(70)	(1.76)

a) Point on T-S curve suggests bottle leaked on way up. Therefore, all values at this level except temperature are probably in error.

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
92	HUGH M. SMITH; March 6, 1951; 0434 GCT; 3°57'N, 172°02'W; wind, 070°, 16 kt; weather, cloudy; sea, rough; wire angle, 42°.										
0	27.20	35.13	4.72	0.50	22.77	0	27.20	35.13	22.77	509	0.00
12	27.15	35.10	4.77	0.49	22.77	10	27.15	35.10	22.77	510	0.05
27	27.02	35.10	4.68	0.48	22.81	20	27.09	35.10	22.79	508	0.10
56	26.88	35.15	4.66	0.58	22.89	30	27.00	35.10	22.81	505	0.15
109	26.59	35.21	4.68	0.68	23.03	50	26.90	35.13	22.87	500	0.25
205	16.99	34.71	2.84	1.29	25.31	75	26.75	35.17	22.95	492	0.38
303	9.21	34.65	1.75	2.39	26.83	100	26.62	35.19	23.00	487	0.50
416	8.23	34.60	2.00	2.47	26.95	150	26.40	35.21	23.09	479	0.75
416	8.29	34.60	-	-	26.94	200	18.50	34.81	25.02	295	0.94
524	7.31	34.59	1.23	2.82	27.07	250	10.41	34.72	26.68	137	1.05
645	6.37	34.55	1.23	3.00	27.17	300	9.26	34.65	26.82	124	1.12
882	4.86	34.56	1.85	2.94	27.37	400	8.39	34.60	26.92	114	1.25
1127	3.89	34.53	2.06	2.94	27.45	500	7.51	34.59	27.04	103	1.36
1407	3.12	34.58	2.08	2.97	27.56	600	6.71	34.57	27.14	93	1.47
						700	5.98	34.56	27.23	85	1.57
						800	5.30	34.56	27.31	77	1.66
						1000	4.39	34.54	27.40	69	1.82
93	HUGH M. SMITH; March 6, 1951; 1308 GCT; 4°56'N, 171°54'W; wind, 030°, 13 kt; weather, partly cloudy; sea, rough; wire angle, <03°.										
5	27.07	35.09	4.67	0.57	22.78	0	(27.10)	(35.09)	(22.78)	(509)	(0.00)
20	27.08	35.08	4.70	0.43	22.77	10	27.09	35.08	22.77	509	0.05
41	27.10	35.08	4.69	0.45	22.77	20	27.08	35.08	22.77	509	0.10
80	27.00	35.08	4.69	0.55	22.80	30	27.09	35.08	22.77	509	0.15
154	26.42	35.20	4.55	0.61	23.07	50	27.08	35.08	22.77	509	0.26
301	9.66	34.67	1.00	2.35	26.77	75	27.01	35.08	22.80	507	0.38
440	8.17	34.59	1.11	2.64	26.95	100	26.98	35.11	22.83	504	0.51
584	6.92	34.58	0.98	2.62	27.12	150	26.53	35.19	23.03	484	0.76
584	6.98	34.58	-	-	27.11	200	16.20	34.66	25.46	253	0.95
731	5.53	34.53	1.40	2.88	27.26	250	10.60	34.68	26.62	143	1.05
883	4.74	34.52	1.57	2.75	27.35	300	9.70	34.67	26.76	129	1.12
1175	3.76	34.56	1.92	2.74	27.48	400	8.52	34.60	26.90	116	1.25
1469	3.08	34.59	2.06	2.72	27.57	500	7.67	34.58	27.01	105	1.37
1767	2.54	34.60	2.15	2.65	27.63	600	6.79	34.58	27.14	94	1.48
						700	5.80	34.54	27.24	84	1.57
						800	5.12	34.52	27.30	78	1.66
						1000	4.26	34.53	27.41	68	1.83
94	HUGH M. SMITH; March 6, 1951; 2135 GCT; 5°55'N, 171°50'W; wind, 010°, 15 kt; weather, cloudy; sea, rough; wire angle, 16°.										
8	27.26	35.01	4.67	0.45	22.66	0	(27.30)	(34.99)	(22.64)	(522)	(0.00)
17	27.26	35.00	4.69	0.46	22.66	10	27.26	34.99	22.65	521	0.05
30	27.26	34.99	4.66	0.39	22.65	20	27.26	34.99	22.65	521	0.10
61	27.26	35.01	4.62	0.47	22.66	30	27.26	34.99	22.65	521	0.16
113	27.10	35.08	4.63	0.48	22.77	50	27.26	35.00	22.66	520	0.26
210	11.17	34.54	1.17	2.30	26.41	75	27.25	35.01	22.67	519	0.39
308	9.42	34.65	1.06	2.53	26.80	100	27.22	35.02	22.68	518	0.52
412	8.45	34.63	1.15	2.63	26.93	150	21.40	34.97	24.38	356	0.74
412	8.51	34.63	-	-	26.92	200	11.90	34.47	26.22	181	0.88
513	7.41	34.57	0.90	2.89	27.04	250	10.20	34.64	26.66	139	0.96
614	6.60	34.55	0.97	2.97	27.14	300	9.52	34.65	26.78	128	1.03
813	5.32	34.52	1.27	2.95	27.28	400	8.53	34.63	26.92	114	1.16
1014	4.41	34.53	1.52	2.97	27.39	500	7.58	34.57	27.02	105	1.28
1217	3.71	34.54	1.84	2.95	27.47	600	6.60	34.55	27.14	94	1.38
						700	5.90	34.54	27.22	86	1.48
						800	5.39	34.52	27.27	81	1.58
						1000	4.48	34.53	27.38	70	1.75

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; March 7, 1951; 0608 GCT; 6°58'N, 171°49'W; wind, 020°, 17 kt; weather, cloudy; sea, rough; wire angle, 23°. 95

0	27.30	34.58	4.70	0.26	22.33	0	27.30	34.58	22.33	552	0.00
10	27.36	34.60	4.71	0.28	22.32	10	27.36	34.60	22.32	552	0.06
24	27.36	34.58	4.73	0.23	22.31	20	27.36	34.57	22.30	554	0.11
52	27.25	34.59	4.70	0.27	22.35	30	27.33	34.57	22.31	554	0.17
104	27.23	34.60	4.71	0.28	22.37	50	27.22	34.59	22.36	548	0.28
192	11.39	34.45	1.81	1.98	26.30	75	27.22	34.59	22.36	548	0.41
287	9.75	34.65	0.78	2.62	26.74	100	27.21	34.60	22.37	548	0.55
390	8.81	34.63	1.23	2.50	26.88	150	17.18	34.63	25.21	277	0.76
390	8.87	34.63	-	-	26.87	200	11.11	34.54	26.42	162	0.87
488	8.12	34.59	1.14	2.54	26.96	250	10.20	34.65	26.66	139	0.95
588	7.18	34.55	0.92	2.82	27.06	300	9.63	34.65	26.76	130	1.02
780	5.80	34.53	1.19	2.82	27.23	400	8.78	34.63	26.88	118	1.15
978	4.72	34.54	1.62	2.83	27.36	500	8.00	34.58	26.96	110	1.27
1179	3.91	34.56	1.82	2.78	27.47	600	7.05	34.55	27.08	99	1.39
						700	6.31	34.54	27.17	91	1.49
						800	5.69	34.53	27.24	84	1.59
						1000	4.59	34.55	27.39	70	1.76

HUGH M. SMITH; March 7, 1951; 1434 GCT; 7°56'N, 171°51'W; wind, 060°, 15 kt; weather, partly cloudy; sea, moderate; wire angle, 24°. 96

0	27.10	34.51	4.74	0.25	22.34	0	27.10	34.51	22.34	551	0.00
11	27.15	34.50	4.74	0.23	22.32	10	27.14	34.50	22.32	553	0.05
24	27.16	34.48	4.66	0.22	22.30	20	27.15	34.49	22.31	554	0.11
52	27.15	34.48	4.65	0.26	22.30	30	27.16	34.48	22.30	554	0.17
104	23.52	34.79	4.81	0.33	23.65	50	27.15	34.48	22.30	554	0.28
202	10.97	34.57	0.95	2.40	26.47	75	27.11	34.50	22.33	552	0.42
298	9.60	34.64	0.61	2.60	26.76	100	24.50	34.79	23.35	454	0.54
401	8.78	34.60	0.92	2.69	26.86	150	16.40	34.49	25.28	270	0.73
499	7.56	34.53	0.75	2.81	26.99	200	11.05	34.56	26.44	160	0.84
599	6.68	34.50	0.90	2.89	27.09	250	10.20	34.64	26.66	139	0.91
791	5.26	34.48	1.37	2.91	27.25	300	9.60	34.64	26.76	130	0.98
987	4.30	34.51	1.62	2.88	27.39	400	8.80	34.60	26.86	120	1.11
1188	3.72	34.53	1.76	2.85	27.46	500	7.51	34.53	27.00	107	1.24
						600	6.66	34.50	27.09	98	1.35
						700	5.89	34.48	27.18	90	1.45
						800	5.19	34.48	27.26	82	1.54
						1000	4.25	34.51	27.39	70	1.72

HUGH M. SMITH; March 7, 1951; 2346 GCT; 9°00'N, 171°58'W; wind, 020°, 14 kt; weather, partly cloudy; sea, moderate; wire angle, 24°. 97

0	26.80	34.35	4.74	0.22	22.31	0	26.80	34.35	22.31	553	0.00
9	26.73	34.34	4.74	0.22	22.33	10	26.72	34.34	22.33	551	0.06
23	26.72	34.34	4.75	0.20	22.33	20	26.72	34.34	22.33	551	0.11
50	26.71	34.35	4.72	0.22	22.35	30	26.72	34.34	22.33	551	0.17
100	21.74	34.78	4.81	0.34	24.14	50	26.71	34.35	22.34	550	0.28
202	11.34	34.52	1.24	2.07	26.36	75	26.69	34.36	22.36	549	0.41
301	9.82	34.65	0.56	2.53	26.73	100	21.74	34.78	24.14	378	0.53
404	8.82	34.62	0.65	2.51	26.87	150	15.60	34.46	25.44	255	0.69
504	7.88	34.57	0.74	2.62	26.97	200	11.40	34.51	26.34	169	0.80
604	6.80	34.52	0.84	2.80	27.09	250	10.50	34.64	26.60	144	0.88
801	5.36	34.55	0.97	2.89	27.30	300	9.88	34.66	26.73	133	0.95
1003	4.34	34.55	1.37	2.78	27.41	400	8.89	34.63	26.87	119	1.09
1204	3.70	34.55	1.66	2.76	27.48	500	7.91	34.57	26.97	110	1.21
						600	6.82	34.52	27.09	98	1.32
						700	6.01	34.54	27.21	87	1.42
						800	5.39	34.55	27.29	79	1.52
						1000	4.33	34.56	27.42	67	1.68

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
98	HUGH M. SMITH; March 8, 1951; 0818 GCT; 10°02'N, 171°56'W; wind, 010°, 14 kt; weather, cloudy; sea, moderate; wire angle, 28°.										
0	26.30	34.33	4.80	0.18	22.46	0	26.30	34.33	22.46	540	0.00
9	26.36	34.31	4.87	0.22	22.42	10	26.36	34.31	22.42	543	0.05
22	26.34	34.30	4.83	0.37	22.42	20	26.35	34.31	22.43	542	0.11
49	26.26	34.29	4.79	0.25	22.44	30	26.32	34.30	22.43	542	0.16
96	22.95	34.87	5.03	0.33	23.87	50	26.25	34.35	22.49	536	0.27
184	11.87	34.37	2.48	1.76	26.14	75	26.19	34.38	22.53	533	0.40
275	9.46	34.57	0.80	2.54	26.73	100	21.50	34.85	24.26	367	0.52
374	8.73	34.59	1.06	2.61	26.86	150	14.60	34.42	25.63	237	0.67
468	8.06	34.55	1.01	2.68	26.93	200	11.12	34.47	26.36	167	0.77
565	7.26	34.55	1.09	2.74	27.05	250	9.80	34.56	26.66	139	0.85
757	5.68	34.52	1.11	2.93	27.23	300	9.22	34.57	26.77	129	0.92
955	4.69	34.53	1.49	2.87	27.36	400	8.58	34.58	26.88	119	1.05
1158	3.90	34.54	1.72	2.85	27.45	500	7.80	34.55	26.97	110	1.18
						600	6.95	34.54	27.08	99	1.29
						700	6.09	34.52	27.18	89	1.39
						800	5.42	34.52	27.27	81	1.49
						1000	4.49	34.53	27.38	70	1.66
99	HUGH M. SMITH; March 8, 1951; 1633 GCT; 11°02'N, 171°52'W; wind, 090°, 10 kt; weather, missing; sea, moderate; wire angle, 24°.										
0	26.10	34.35	4.78	0.20	22.53	0	26.10	34.35	22.53	532	0.00
9	26.15	34.35	4.80	0.19	22.52	10	26.14	34.35	22.52	533	0.05
22	26.14	34.38	4.81	0.15	22.54	20	26.14	34.38	22.54	531	0.11
48	26.15	34.36	4.80	0.19	22.53	30	26.14	34.36	22.53	532	0.16
97	23.56	34.96	5.08	0.19	23.76	50	26.14	34.38	22.54	531	0.27
193	12.13	34.40	2.48	1.58	26.12	75	26.15	34.39	22.55	531	0.40
287	9.72	34.54	0.67	2.38	26.66	100	23.20	34.98	23.88	403	0.52
385	8.48	34.55	0.65	2.47	26.87	150	16.00	34.54	25.41	257	0.68
480	7.65	34.55	0.83	2.46	26.99	200	11.70	34.43	26.22	180	0.80
579	6.80	34.52	0.73	2.52	27.09	250	10.29	34.52	26.55	150	0.88
774	5.48	34.51	0.87	2.68	27.25	300	9.53	34.55	26.70	135	0.96
972	4.46	34.53	1.24	2.68	27.39	400	8.35	34.56	26.90	117	1.09
1170	-	34.53	1.53	2.77	-	500	7.49	34.54	27.01	106	1.21
						600	6.62	34.52	27.11	96	1.32
						700	5.93	34.51	27.20	88	1.42
						800	5.33	34.51	27.27	81	1.51
						1000	4.35	34.53	27.40	69	1.68
100	HUGH M. SMITH; March 9, 1951; 0048 GCT; 12°00'N, 171°52'W; wind, 080°, 7 kt; weather, cloudy; sea, moderate; wire angle, 10°.										
5	26.32	34.43	4.85	0.23	22.52	0	(26.30)	(34.43)	(22.53)	(532)	(0.00)
14	26.08	34.42	4.91	0.24	22.59	10	26.13	34.42	22.58	528	0.05
29	26.06	34.43	4.84	0.22	22.61	20	26.07	34.42	22.60	526	0.11
58	26.07	34.43	4.79	0.25	22.60	30	26.06	34.43	22.61	525	0.16
110	22.22	35.08	4.92	0.25	24.24	50	26.07	34.43	22.60	525	0.26
215	11.26	34.46	1.54	2.15	26.33	75	26.00	34.45	22.64	522	0.40
320	9.42	34.59	0.47	2.64	26.75	100	24.90	34.74	23.20	469	0.52
430	8.30	34.56	0.62	2.83	26.90	150	18.68	34.82	24.98	298	0.71
535	7.32	34.52	0.73	2.83	27.02	200	11.90	34.43	26.18	184	0.84
640	6.46	34.51	0.78	2.93	27.13	250	10.48	34.53	26.52	152	0.92
844	5.28	34.51	0.84	2.93	27.28	300	9.65	34.58	26.70	135	1.00
1051	4.31	34.56	1.26	2.93	27.42	400	8.00	34.57	26.96	111	1.13
1254	3.64	34.56	1.59	2.88	27.49	500	7.65	34.53	26.98	109	1.24
						600	6.80	34.51	27.08	99	1.36
						700	6.13	34.51	27.17	90	1.46
						800	5.53	34.51	27.25	83	1.56
						1000	4.55	34.54	27.38	70	1.73

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; March 9, 1951; 0907 GCT; 13°01'N, 171°48'W; wind, 100°, 7 kt; weather, partly cloudy; sea, slight; wire angle, 07°.											101
5	25.74	34.56	4.85	0.18	22.80	0	(25.70)	(34.56)	(22.82)	(505)	(0.00)
15	25.50	34.57	4.87	0.18	22.88	10	25.65	34.56	22.83	504	0.05
29	25.46	34.56	4.88	0.17	22.89	20	25.47	34.57	22.89	497	0.10
54	25.44	34.56	4.85	0.18	22.90	30	25.45	34.57	22.90	497	0.15
102	23.74	35.00	4.99	0.22	23.74	50	25.45	34.57	22.90	497	0.25
202	14.27	34.45	3.65	0.97	25.72	75	25.39	34.58	22.93	494	0.38
298	9.74	34.43	1.19	2.38	26.57	100	24.60	34.78	23.32	457	0.49
398	8.30	34.50	0.76	2.57	26.86	150	19.06	34.86	24.92	305	0.69
494	7.36	34.53	0.87	2.70	27.02	200	14.90	34.50	25.63	237	0.82
594	6.52	34.52	0.98	2.71	27.13	250	11.40	34.39	26.25	178	0.93
791	5.22	34.52	1.14	2.72	27.29	300	9.70	34.44	26.59	146	1.02
984	4.34	34.52	1.43	2.68	27.39	400	8.29	34.50	26.86	120	1.16
1191	3.66	34.58	1.57	2.70	27.51	500	7.30	34.52	27.02	105	1.28
						600	6.50	34.52	27.13	94	1.38
						700	5.86	34.52	27.21	87	1.48
						800	5.20	34.52	27.29	79	1.58
						1000	4.30	34.53	27.40	69	1.74
HUGH M. SMITH; March 9, 1951; 1720 GCT; 13°58'N, 171°24'W; wind, 080°, 9 kt; weather, cloudy; sea, moderate; wire angle, 10°.											102
0	25.30	34.53	4.83	0.25	22.92	0	25.30	34.53	22.92	496	0.00
10	25.30	34.54	4.83	0.23	22.92	10	25.30	34.54	22.92	495	0.05
25	25.32	34.52	4.89	0.22	22.90	20	25.30	34.54	22.92	495	0.10
50	25.28	34.54	4.85	0.26	22.93	30	25.29	34.54	22.93	494	0.15
100	23.02	35.09	4.91	0.22	24.02	50	25.28	34.54	22.93	494	0.25
198	14.95	34.51	4.03	0.86	25.62	75	24.82	34.69	23.18	470	0.37
292	9.68	34.25	2.51	2.06	26.44	100	23.02	35.09	24.02	390	0.48
390	7.91	34.34	1.19	2.57	26.79	150	18.90	34.85	24.95	302	0.65
482	7.08	34.43	0.90	2.72	26.98	200	14.82	34.50	25.64	235	0.79
581	6.18	34.45	0.89	2.87	27.12	250	10.92	34.28	26.25	178	0.90
774	5.10	34.50	1.01	2.97	27.29	300	9.51	34.25	26.47	157	0.98
965	4.36	34.52	1.29	2.90	27.39	400	7.81	34.36	26.82	124	1.13
1171	3.68	34.51	1.53	2.90	27.45	500	6.92	34.43	27.00	106	1.25
						600	6.09	34.46	27.14	94	1.36
						700	5.53	34.48	27.22	86	1.46
						800	5.00	34.50	27.30	78	1.55
						1000	4.26	34.52	27.40	69	1.71
HUGH M. SMITH; March 10, 1951; 0228 GCT; 15°00'N, 170°52'W; wind, 080°, 9 kt; weather, haze; sea, moderate; wire angle, 12°.											103
0	25.20	34.66	4.89	0.26	23.05	0	25.20	34.66	23.05	483	0.00
10	25.00	34.65	4.92	0.26	23.10	10	25.00	34.65	23.10	478	0.05
24	24.98	34.67	4.90	0.24	23.12	20	24.99	34.66	23.11	477	0.10
53	24.95	34.65	4.89	0.23	23.11	30	24.98	34.66	23.11	477	0.14
106	23.04	35.09	4.91	0.26	24.01	50	24.97	34.65	23.11	477	0.24
211	16.30	34.63	4.22	0.60	25.41	75	24.91	34.70	23.16	472	0.36
314	9.48	34.23	2.52	2.29	26.46	100	23.55	35.03	23.82	409	0.47
421	7.68	34.39	0.93	2.51	26.86	150	21.69	35.08	24.38	356	0.66
523	6.73	34.46	0.93	2.69	27.05	200	18.22	34.80	25.08	289	0.83
627	5.81	34.46	1.01	2.69	27.17	250	12.59	34.29	25.94	207	0.95
829	4.89	34.48	1.15	2.72	27.30	300	9.98	34.23	26.37	166	1.05
1036	4.00	34.54	1.35	2.76	27.44	400	7.95	34.35	26.79	126	1.20
1239	3.27	34.57	1.75	2.78	27.54	500	6.90	34.46	27.03	104	1.33
						600	6.02	34.46	27.15	93	1.43
						700	5.50	34.46	27.21	87	1.53
						800	5.02	34.48	27.28	80	1.62
						1000	4.15	34.53	27.42	67	1.79

HBL

HMS-8

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
104	HUGH M. SMITH; March 10, 1951; 1905 GCT; 16°58'N, 169°41'W; wind, 060°, 6 kt; weather, cloudy; sea, moderate; wire angle, 16°.										
4	25.07	34.36	4.87	0.30	22.86	0	(25.10)	(34.36)	(22.85)	(502)	(0.00)
14	25.08	34.34	4.87	0.27	22.84	10	25.09	34.35	22.84	502	0.05
28	25.08	34.35	4.90	0.25	22.85	20	25.08	34.35	22.85	502	0.10
52	25.06	34.34	4.85	0.30	22.85	30	25.07	34.35	22.85	502	0.15
98	24.55	34.46	4.86	0.26	23.09	50	25.05	34.34	22.85	502	0.25
187	13.68	34.33	3.19	1.32	25.75	75	24.85	34.38	22.94	493	0.38
274a)	10.46	34.35	1.23	2.21	26.39	100	24.49	34.56	23.18	470	0.50
364	7.76	34.22	1.69	2.51	26.72	150	18.80	34.87	24.99	298	0.69
451	6.62	34.27	1.14	2.68	26.92	200	12.70	34.26	25.90	211	0.82
546	5.91	34.34	1.01	2.88	27.06	250	10.80	34.18	26.19	183	0.92
732	5.12	34.48	1.06	2.88	27.27	300	9.21	34.18	26.46	158	1.01
909	4.30	34.51	1.30	2.87	27.39	400	7.21	34.24	26.81	124	1.16
						500	6.22	34.30	26.99	107	1.28
						600	5.63	34.39	27.14	94	1.39
						700	5.27	34.46	27.24	84	1.49
						800	4.80	34.49	27.32	77	1.58
						1000	(3.94)	(34.53)	(27.44)	(65)	(1.74)
105	HUGH M. SMITH; March 11, 1951; 1230 GCT; 18°58'N, 168°27'W; wind, 260°, 7 kt; weather, partly cloudy; sea, slight; wire angle, 09°.										
5	24.56	34.65	4.87	0.20	23.23	0	(24.60)	(34.65)	(23.22)	(466)	(0.00)
15	24.51	34.63	4.92	0.17	23.23	10	24.53	34.65	23.24	464	0.05
30	24.50	34.67	4.93	0.18	23.26	20	24.50	34.64	23.24	464	0.09
54	24.21	34.96	4.93	0.17	23.57	30	24.50	34.67	23.26	462	0.14
102	23.43	35.21	4.94	0.18	23.99	50	24.25	34.91	23.52	438	0.23
195	17.85	34.79	4.42	0.43	25.17	75	23.95	35.09	23.74	416	0.34
284a)	11.04	34.25	2.78	1.67	26.20	100	23.55	35.18	23.93	399	0.44
374	8.32	34.16	2.13	2.06	26.59	150	22.01	35.18	24.37	357	0.63
374	8.38	34.16	-	-	26.58	200	17.21	34.72	25.27	271	0.79
466	7.08	34.24	1.25	2.46	26.83	250	12.65	34.29	25.93	208	0.91
559	6.01	34.27	1.08	2.69	27.00	300	10.40	34.16	26.25	178	1.01
742	4.99	34.43	1.24	2.74	27.25	400	7.95	34.20	26.67	138	1.18
925	4.38	34.49	1.30	2.50	27.36	500	6.70	34.25	26.89	117	1.31
1125	3.76	34.52	1.51	2.53	27.45	600	5.68	34.31	27.07	100	1.43
						700	5.12	34.42	27.22	86	1.53
						800	4.81	34.46	27.29	79	1.62
						1000	4.15	34.51	27.40	68	1.78
106	HUGH M. SMITH; March 12, 1951; 0540 GCT; 20°59'N, 167°07'W; wind, 300°, 9 kt; weather, cloudy; sea, moderate; wire angle, 21°.										
5	23.64	35.20	5.02	0.12	23.92	0	(23.70)	(35.20)	(23.90)	(401)	(0.00)
14	23.64	35.21	5.05	0.12	23.93	10	23.65	35.20	23.92	400	0.04
28	23.48	35.20	5.03	0.12	23.97	20	23.60	35.20	23.93	398	0.08
28	-	-	-	0.08	-	30	23.48	35.20	23.97	395	0.12
51	23.43	35.20	5.01	0.08	23.98	50	23.41	35.20	23.99	393	0.20
97	23.03	35.28	5.00	0.12	24.16	75	23.31	35.23	24.04	388	0.30
190	17.73	34.85	4.35	0.38	25.24	100	22.99	35.28	24.17	376	0.39
280a)	12.40	34.52	4.52	0.73	26.16	150	20.34	35.09	24.76	320	0.57
375	9.60	34.14	4.32	1.31	26.37	200	17.45	34.82	25.29	270	0.72
375	9.67	34.14	-	-	26.36	250	14.30	34.53	25.78	223	0.85
465	7.64	34.05	3.16	1.93	26.60	300	11.71	34.29	26.11	191	0.95
559	6.05	34.10	1.94	2.40	26.86	400	9.00	34.10	26.43	160	1.14
743	4.84	34.33	1.13	2.75	27.18	500	6.96	34.05	26.70	135	1.29
928	4.20	34.49	1.36	2.77	27.38	600	5.69	34.15	26.94	112	1.42
1126	3.40	34.52	1.55	2.77	27.48	700	5.05	34.28	27.12	95	1.53
						800	4.68	34.39	27.25	83	1.63
						1000	3.92	34.51	27.43	66	1.80

a) Point on T-S curve suggests bottle leaked on way up. Therefore, all values at this level except temperature are probably in error.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; July 21, 1951; 1820 GCT; 20°18'N, 159°20'W; sounding, 2500 fm; wind, 060°, 16 kt; weather, cloudy; sea, rough; wire angle, 42°.										1
0	25.90	34.65	4.65	22.81	0	25.93	34.65	22.81	505	0.00
8	25.94	34.65	4.66	22.81	10	25.94	34.65	22.80	506	0.05
22	25.94	- a)	4.70	-	20	25.94	34.68	22.83	504	0.10
42	26.05	34.74	4.69	22.84	30	25.98	34.71	22.84	502	0.15
80	25.36	34.79	4.96	23.09	50	26.04	34.76	22.86	501	0.25
146	21.18	- a)	-	-	75	25.97	34.79	22.90	497	0.38
210	17.64	34.87	4.70	25.28	100	23.30	35.05	23.90	401	0.49
270	11.96	34.23	4.28	26.02	150	20.99	35.15	24.63	332	0.68
332	8.79	34.04	3.77	26.42	200	18.25	34.93	25.17	280	0.83
393	8.19	34.17	2.30	26.62	250	14.10	34.47	25.77	223	0.96
520	6.33	- b)	-	-	300	9.90	34.06	26.25	178	1.06
659	5.37	34.35	0.96	27.14	400	8.11	34.18	26.63	142	1.23
823	4.64	- b)	1.79	-	500	6.62	34.28	26.92	114	1.36
					600	5.72	34.33	27.08	99	1.48
					700	5.18	34.37	27.17	90	1.58
					800	4.72	34.40	27.25	83	1.68
					1000	(3.92)	(34.46)	(27.38)	(70)	(1.84)
HUGH M. SMITH; July 22, 1951; 0211 GCT; 21°03'N, 159°14'W; sounding, 2500 fm; wind, 020°, 14 kt; weather, missing; sea, missing; wire angle, 00°.										2
4	26.60	34.77	4.75	22.69	0	(26.61)	(34.77)	(22.69)	(517)	(0.00)
20	26.48	34.78	4.75	22.74	10	26.59	34.77	22.69	516	0.05
40	26.49	34.77	4.75	22.73	20	26.48	34.78	22.73	512	0.10
80	23.60	35.01	5.16	23.79	30	26.48	34.78	22.73	512	0.16
155	19.76	35.06	4.56	24.89	50	26.49	34.78	22.73	513	0.26
300	10.74	34.18	4.26	26.20	75	24.02	34.97	23.63	427	0.38
438	7.02	34.01	2.64	26.66	100	22.64	35.12	24.14	378	0.48
586	5.64	34.23	1.09	27.01	150	19.95	35.07	24.84	311	0.65
725	5.00	34.34	0.95	27.18	200	17.83	34.87	25.23	274	0.80
874	4.40	34.42	1.06	27.30	250	14.13	34.49	25.78	222	0.93
1163	3.61	- b)	-	-	300	10.74	34.18	26.20	182	1.03
1454	2.96	34.51	1.68	27.52	400	7.73	34.01	26.55	149	1.20
1753	2.42	34.57	1.96	27.61	500	6.35	34.07	26.79	126	1.35
					600	5.57	34.24	27.02	104	1.47
					700	5.11	34.33	27.15	92	1.58
					800	4.71	34.38	27.23	84	1.67
					1000	3.94	34.46	27.38	70	1.84
HUGH M. SMITH; July 22, 1951; 0905 GCT; 21°44'N, 159°13'W; sounding, 1850 fm; wind, 060°, 15 kt; weather, missing; sea, moderate; wire angle, 30°.										3
0	25.90	34.88	4.86	23.01	0	25.86	34.88	23.00	487	0.00
10	25.86	34.86	4.82	22.99	10	25.86	34.86	22.99	488	0.05
27	25.42	34.88	4.80	23.15	20	25.86	34.87	23.00	487	0.10
51	23.75	35.02	5.25	23.75	30	25.17	34.89	23.22	466	0.14
100	21.88	35.17	5.02	24.40	50	23.77	35.02	23.74	416	0.23
197	17.81	34.84	4.54	25.22	75	22.64	35.13	24.15	377	0.33
294	12.72	34.27	4.54	25.90	100	21.88	35.17	24.40	354	0.43
387	8.82	34.08	3.71	26.45	150	20.49	35.11	24.73	322	0.60
485	6.81	33.99	2.26	26.67	200	17.68	34.83	25.23	274	0.75
578	5.53	34.14	1.29	26.95	250	15.78	34.60	25.50	248	0.88
767	4.54	- b)	-	-	300	12.34	34.25	25.96	205	1.00
958	4.12	34.44	1.24	27.35	400	8.52	34.07	26.48	156	1.19
1156	3.53	- b)	1.26	-	500	6.60	34.00	26.70	134	1.34
					600	5.34	34.19	27.01	105	1.47
					700	4.78	34.34	27.19	88	1.57
					800	4.49	34.39	27.27	81	1.66
					1000	4.01	34.45	27.36	72	1.83

a) Sample lost; Nansen bottle tripped accidentally.
b) Value did not fit the temperature-salinity curve.

HBL

HMS-10

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

4 HUGH M. SMITH; July 22, 1951; 1635 GCT; 22°22'N, 159°15'W; sounding, 1250 fm; wind, 040°, 13 kt; weather, cloudy; sea, moderate; wire angle, 32°.

0	25.60	34.82	4.82	23.04	0	25.59	34.82	23.04	483	0.00
9	25.60	34.83	4.86	23.05	10	25.60	34.83	23.05	483	0.05
26	25.62	34.85	4.84	23.06	20	25.61	34.84	23.05	482	0.10
50	25.44	34.87	4.94	23.13	30	25.62	34.85	23.05	482	0.14
99	23.17	35.08	5.11	23.97	50	25.44	34.87	23.12	475	0.24
187	19.56	35.05	4.55	24.93	75	24.06	35.00	23.64	426	0.35
271	13.71	34.33	4.52	25.75	100	23.14	35.09	23.98	394	0.46
352	10.06	34.06	4.30	26.23	150	21.10	35.19	24.63	332	0.64
439	7.57	34.02	2.85	26.59	200	19.32	35.02	24.97	299	0.80
525	6.38	34.03	1.98	26.76	250	16.00	34.61	25.46	252	0.94
701	4.88	- a)	-	-	300	12.03	34.19	25.97	204	1.06
888	4.24	34.41	0.99	27.31	400	8.50	34.03	26.45	158	1.25
1077	3.68	- a)	-	-	500	6.66	34.02	26.71	134	1.40
					600	5.65	34.13	26.93	113	1.53
					700	4.90	34.27	27.13	94	1.64
					800	4.52	34.35	27.23	84	1.74
					1000	3.91	34.50	26.41	67	1.91

5 HUGH M. SMITH; July 22, 1951; 2311 GCT; 23°02'N, 159°15'W; sounding, 2600 fm; wind, 040°, 16 kt; weather, partly cloudy; sea, moderate; wire angle, 27°.

1	25.90	34.80	4.87	22.93	0	(25.91)	(34.80)	(22.93)	(494)	(0.00)
9	25.89	34.79	4.86	22.93	10	25.88	34.79	22.93	494	0.05
28	25.80	34.85	4.85	23.00	20	25.86	34.84	22.97	490	0.10
54	25.11	34.85	5.05	23.22	30	25.79	34.85	23.00	487	0.15
108	23.32	35.06	5.11	23.91	50	25.73	34.85	23.02	485	0.24
213	19.20	35.07	4.57	25.04	75	24.53	34.90	23.42	447	0.36
316	13.14	34.34	4.42	25.87	100	23.56	35.03	23.81	410	0.47
414	8.89	34.13	4.04	26.48	150	21.90	35.18	24.40	354	0.66
516	6.83	34.02	2.23	26.69	200	19.80	35.12	24.92	304	0.83
615	5.52	34.12	1.08	26.94	250	17.06	34.81	25.37	261	0.98
818	4.52	- a)	-	-	300	14.00	34.43	25.76	224	1.10
1020	3.86	34.59	1.24	27.50	400	9.28	34.15	26.42	161	1.30
1228	3.38	34.56	2.99	27.52	500	7.10	34.02	26.65	139	1.46
					600	5.72	34.09	26.89	117	1.60
					700	5.00	34.24	27.09	98	1.71
					800	4.61	34.35	27.22	85	1.81
					1000	3.96	34.57	27.47	62	1.97

6 HUGH M. SMITH; July 23, 1951; 0738 GCT; 22°48'N, 158°25'W; sounding, 2600 fm; wind, missing; weather, missing; sea, missing; wire angle, 14°.

0	25.70	34.86	4.87	23.03	0	25.73	34.86	23.03	484	0.00
10	25.74	34.87	4.88	23.04	10	25.74	34.87	23.03	484	0.05
30	25.73	34.85	4.88	23.03	20	25.74	34.86	23.02	485	0.10
58	25.73	34.87	4.90	23.04	30	25.73	34.85	23.02	485	0.14
118	21.94	- b)	4.99	-	50	25.73	34.86	23.03	484	0.24
232	17.84	34.86	4.50	25.22	75	25.73	34.87	23.04	484	0.36
342	11.26	34.10	4.45	26.05	100	23.16	35.07	23.96	396	0.48
448	7.68	34.03	3.28	26.58	150	20.72	35.17	24.71	324	0.66
561	6.36	34.15	1.35	26.86	200	19.03	35.01	25.04	293	0.81
669	5.10	34.24	0.84	27.08	250	17.13	34.76	25.31	266	0.96
892	4.43	34.43	1.22	27.31	300	14.22	34.38	25.68	232	1.09
1110	3.75	34.47	1.33	27.41	400	8.82	34.04	26.41	162	1.29
1321	3.26	34.47	1.51	27.46	500	6.78	34.11	26.76	128	1.44
					600	5.64	34.19	26.97	109	1.57
					700	4.97	34.26	27.11	96	1.68
					800	4.69	34.36	27.22	85	1.78
					1000	4.11	34.46	27.36	72	1.95

a) Value did not fit the temperature-salinity curve.
b) Sample lost.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; July 23, 1951; 1355 GCT; 22°08'N, 158°24'W; sounding, 2700 fm; wind, missing; weather, overcast; sea, missing; wire angle, 21°.										7
1	25.80	34.65	4.85	22.85	0	(25.83)	(34.65)	(22.84)	(502)	(0.00)
11	25.86	34.66	4.85	22.84	10	25.86	34.66	22.84	503	0.05
29	25.86	34.65	4.84	22.84	20	25.86	34.66	22.84	503	0.10
57	25.02	34.94	5.09	23.31	30	25.86	34.65	22.83	503	0.15
114	22.26	35.15	4.81	24.28	50	25.54	34.82	23.06	482	0.25
226	18.09	34.88	4.63	25.18	75	24.00	35.04	23.69	422	0.36
339	10.71	34.14	3.82	26.18	100	22.93	35.13	24.07	385	0.46
446	7.85	34.04	3.15	26.56	150	20.54	35.13	24.73	322	0.64
559	5.90	34.08	1.70	26.86	200	18.91	34.98	25.04	292	0.80
667	4.93	34.19	0.84	27.06	250	17.00	34.75	25.34	264	0.94
890	4.16	34.44	1.41	27.35	300	13.22	34.30	25.82	218	1.07
1105	3.66	34.47	1.35	27.42	400	8.84	34.09	26.45	159	1.26
1316	3.12	- a)	1.51	-	500	6.86	34.03	26.69	136	1.42
					600	5.48	34.12	26.94	112	1.55
					700	4.79	34.23	27.11	96	1.66
					800	4.41	34.39	27.27	80	1.76
					1000	3.89	34.46	27.39	70	1.92
HUGH M. SMITH; July 23, 1951; 2044 GCT; 21°29'N, 158°25'W; sounding, 1350 fm; wind, missing; weather, overcast; sea, smooth; wire angle, 02°.										8
0	26.20	34.64	4.80	22.71	0	26.23	34.64	22.71	515	0.00
10	26.06	34.57	4.78	22.71	10	26.06	34.57	22.71	515	0.05
25	26.00	34.58	4.82	22.74	20	26.04	34.58	22.72	514	0.10
56	24.98	34.42	4.99	22.93	30	25.99	34.57	22.73	513	0.15
111	22.83	34.91	5.06	23.94	50	25.12	34.44	22.90	497	0.26
219	17.26	34.77	4.51	25.29	75	24.47	34.48	23.12	475	0.38
327	10.56	34.12	4.27	26.19	100	23.52	34.70	23.57	432	0.49
437	7.91b)	34.17	2.09	26.65	150	21.45	35.04	24.42	352	0.69
437	7.97b)	34.17	-	26.65	200	18.43	34.91	25.11	286	0.85
543	6.55	34.22	1.24	26.89	250	15.07	34.49	25.58	241	0.99
647	5.51	34.27	1.05	27.06	300	11.91	34.20	26.00	201	1.10
855	4.48	34.40	1.34	27.28	400	8.64	34.14	26.52	152	1.29
1065	3.88	34.51	1.33	27.43	500	7.04	34.20	26.80	125	1.43
1267	3.38	34.50	2.92	27.47	600	5.95	34.25	26.98	108	1.56
					700	5.21	34.30	27.11	96	1.67
					800	4.71	34.37	27.23	85	1.76
					1000	3.99	34.49	27.40	68	1.94
HUGH M. SMITH; July 19, 1951; 2333 GCT; 21°26'N, 158°25'W; sounding, 1300 fm; wind, 040°, 14 kt; weather, partly cloudy; sea, slight; wire angle, 07°.										8-A
0	26.20	34.78	5.00	22.84	0	26.17	34.78	22.83	503	0.00
10	26.14	34.80	4.84	22.86	10	26.14	34.80	22.86	501	0.05
30	26.08	- c)	4.86	-	20	26.11	34.81	22.87	499	0.10
61	24.36	34.89	5.09	23.47	30	26.08	34.82	22.89	498	0.15
118	22.12	- c)	4.97	-	50	25.15	34.83	23.18	469	0.25
235	17.30	- c)	-	-	75	23.62	34.98	23.75	415	0.36
350	9.98	34.12	4.24	26.29	100	22.46	35.13	24.20	372	0.46
461	7.42	34.16	1.83	26.72	150	20.67	35.13	24.70	325	0.63
578	5.78	34.25	1.16	27.01	200	18.86	34.96	25.04	293	0.79
690	5.05	- c)	1.22	-	250	16.59	34.71	25.40	258	0.93
919	4.25	- a)	-	-	300	13.05	34.35	25.89	211	1.05
1141	3.60	34.53	1.33	27.47	400	8.59	34.13	26.52	152	1.24
1353	3.16	- a)	-	-	500	6.83	34.19	26.82	123	1.39
					600	5.60	34.27	27.04	102	1.51
					700	5.02	34.33	27.16	91	1.61
					800	4.63	34.38	27.24	83	1.71
					1000	4.01	34.49	27.40	69	1.88

a) Value did not fit the temperature-salinity curve.
b) Thermometers did not agree within 0.02° C tolerance. Average value used in constructing temperature-salinity curve.
c) Sample lost; Nansen bottle leaked.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
9	HUGH M. SMITH; July 23, 1951; 0850 GCT; 20°50'N, 158°25'W; sounding, 2350 fm; wind, direction missing, 22 kt; weather, missing; sea, missing; wire angle, 58°.									
0	26.20	34.63	4.83	22.70	0	26.24	34.63	22.70	516	0.00
10	26.26	34.60	4.79	22.67	10	26.26	34.60	22.67	519	0.05
20	26.24	34.60	4.79	22.68	20	26.24	34.60	22.67	518	0.10
42	25.90	34.75	4.92	22.90	30	26.16	34.63	22.72	514	0.16
81	24.22	34.92	5.18	23.54	50	25.80	34.77	22.94	493	0.26
151	20.02	35.00	4.86	24.78	75	24.47	34.90	23.44	445	0.37
210	14.66	34.42	4.17	25.62	100	23.16	34.98	23.89	402	0.48
269	10.36	34.17	3.42	26.26	150	20.40	35.01	24.68	327	0.66
330	8.78	34.19	2.43	26.54	200	15.71	34.55	25.48	250	0.81
387	7.88	34.23	2.02	26.71	250	11.30	34.19	26.11	191	0.93
503	6.42	34.37	2.29	27.02	300	9.42	34.17	26.42	162	1.02
617	5.72	34.35	0.86	27.10	400	7.71	34.24	26.74	132	1.17
775	5.08	34.44	- a)	27.25	500	6.48	34.36	27.00	106	1.30
					600	5.81	34.34	27.07	100	1.40
					700	5.34	34.39	27.17	90	1.51
					800	(5.00)	(34.45)	(27.26)	(82)	(1.60)
					1000	(4.50)	(34.49)	(27.34)	(74)	(1.78)
10	HUGH M. SMITH; July 24, 1951; 1733 GCT; 20°17'N, 158°21'W; sounding, 2520 fm; wind, 060°, 12 kt; weather, missing; sea, missing; wire angle, 42°.									
0	26.30	34.88	5.03	22.88	0	26.26	34.88	22.88	499	0.00
7	26.26	34.92	4.81	22.91	10	26.26	34.92	22.91	496	0.05
21	26.28	34.92	4.85	22.90	20	26.28	34.92	22.90	496	0.10
41	24.10	34.97	5.16	23.61	30	26.28	34.93	22.91	496	0.15
79	20.50	35.01	4.97	24.65	50	22.56	35.01	24.08	384	0.24
156	14.84	34.48	4.15	25.63	75	20.79	35.02	24.58	336	0.33
233	10.64	34.16	4.12	26.21	100	19.01	34.93	24.98	298	0.41
307	8.65	34.14	2.62	26.52	150	15.30	34.54	25.57	242	0.54
383	7.28	34.17	2.09	26.75	200	12.07	34.23	25.99	202	0.66
454	6.55	34.22	1.18	26.89	250	10.03	34.16	26.31	172	0.75
608	5.56	34.39	1.19	27.15	300	8.80	34.15	26.50	154	0.84
776	4.94	34.41	1.01	27.24	400	7.08	34.19	26.79	126	0.98
962	4.21	34.44	1.22	27.34	500	6.26	34.26	26.95	111	1.11
					600	5.63	34.39	27.13	94	1.22
					700	5.20	34.40	27.19	88	1.32
					800	4.84	34.41	27.24	83	1.41
					1000	(4.14)	(34.44)	(27.34)	(74)	(1.59)
11	HUGH M. SMITH; July 25, 1951; 0646 GCT; 18°45'N, 157°30'W; sounding, 2425 fm; wind, 070°, 16 kt; weather, missing; sea, slight; wire angle, 32°.									
0	25.90	34.61	4.86	22.80	0	25.86	34.61	22.80	506	0.00
9	25.86	34.61	4.85	22.80	10	25.86	34.61	22.80	506	0.05
27	25.88	34.61	4.84	22.80	20	25.87	34.61	22.80	506	0.10
51	25.72	34.59	4.87	22.83	30	25.88	34.61	22.79	507	0.15
101	25.48	34.65	4.94	22.95	50	25.75	34.59	22.82	504	0.25
194	20.76	35.11	4.88	24.66	75	25.64	34.60	22.86	501	0.38
282	12.24	34.21	3.52	25.95	100	25.49	34.65	22.94	492	0.50
367	9.01b)	34.14	2.79	26.46	150	23.45	35.01	23.83	408	0.73
367	9.07b)	34.14	-	26.45	200	20.24	35.06	24.76	319	0.92
456	7.25	34.14	1.77	26.73	250	15.13	34.50	25.57	242	1.06
541	6.46	34.28	0.93	26.95	300	11.28	34.18	26.10	192	1.17
719	5.44	34.46	1.03	27.22	400	8.36	34.14	26.56	148	1.35
901	4.48	34.50	1.04	27.36	500	6.81	34.20	26.83	122	1.49
1090	4.04	- c)	0.92	-	600	6.11	34.35	27.04	102	1.61
					700	5.58	34.44	27.18	89	1.72
					800	5.02	34.49	27.29	79	1.81
					1000	4.14	34.50	27.39	69	1.98

a) Sample spoiled.

b) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-salinity curve.

c) Value did not fit the temperature-salinity curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; July 25, 1951; 1435 GCT; 19°32'N, 157°28'W; sounding, 2360 fm; wind, 240°, 4 kt; weather, overcast; sea, slight; wire angle, 11°. 12

0	26.00	34.66	4.84	22.79	0	26.01	34.66	22.79	507	0.00
11	25.95	34.64	4.85	22.80	10	25.96	34.64	22.79	507	0.05
29	25.84	34.65	4.86	22.84	20	25.91	34.64	22.81	506	0.10
60	25.37	34.67	4.86	23.00	30	25.84	34.65	22.84	503	0.15
118	23.25	35.04	5.15	23.91	50	25.56	34.66	22.93	494	0.25
235	16.36	34.61	4.35	25.38	75	25.25	34.69	23.05	482	0.37
349	9.76	34.17	2.99	26.36	100	24.83	34.77	23.24	465	0.49
459	7.86	34.29	1.34	26.76	150	21.32	35.12	24.51	343	0.70
574	6.34	34.27	0.74	26.96	200	17.85	34.80	25.17	280	0.86
683	5.90	34.40	0.70	27.11	250	15.62	34.53	25.49	250	0.99
909	4.71	34.50	1.14	27.33	300	12.44	34.24	25.93	208	1.11
1129	3.97	34.51	1.16	27.42	400	8.76	34.23	26.57	147	1.30
1343	3.40	34.51	1.51	27.48	500	7.30	34.27	26.82	124	1.44
					600	6.22	34.30	26.99	107	1.56
					700	5.83	34.41	27.12	94	1.67
					800	5.31	34.47	27.24	84	1.77
					1000	4.34	34.50	27.37	71	1.94

HUGH M. SMITH; July 25, 1951; 2014 GCT; 20°07'N, 157°28'W; sounding, 2260 fm; wind, 040°, 19 kt; weather, cloudy; sea, slight; wire angle, 31°. 13

1	25.90	34.67	4.82	22.85	0	(25.87)	(34.68)	(22.85)	(502)	(0.00)
11	25.88	34.64	4.86	22.82	10	25.88	34.64	22.82	504	0.05
29	25.88	34.65	4.83	22.83	20	25.88	34.64	22.82	504	0.10
56	25.86	34.64	4.84	22.82	30	25.88	34.65	22.82	504	0.15
110	24.90	34.60	4.97	23.09	50	25.86	34.65	22.83	503	0.25
215	16.83	34.63	4.15	25.29	75	25.84	34.63	22.82	504	0.38
320	10.08	34.17	3.14	26.31	100	25.22	34.58	22.97	490	0.50
420	8.37	34.25	1.71	26.65	150	22.39	35.07	24.18	375	0.72
524	6.79	34.22	1.08	26.86	200	18.07	34.78	25.10	287	0.89
625	6.19	34.35	0.70	27.04	250	13.88	34.33	25.71	229	1.02
833	4.88	34.48	1.27	27.30	300	10.67	34.18	26.21	181	1.13
1041	4.12	34.49	1.38	27.39	400	8.72	34.23	26.58	147	1.30
1247	3.52	34.51	1.42	27.47	500	7.08	34.21	26.80	125	1.44
					600	6.34	34.32	26.99	107	1.57
					700	5.68	34.43	27.16	91	1.68
					800	5.06	34.48	27.27	80	1.77
					1000	4.29	34.50	27.37	71	1.94

HUGH M. SMITH; July 26, 1951; 0137 GCT; 20°43'N, 157°29'W; sounding, 1500 fm; wind, 080°, 14 kt; weather, partly cloudy; sea, slight; wire angle, 12°. 14

0	26.20	34.60	4.82	22.69	0	26.20	34.60	22.69	517	0.00
10	26.02	34.61	4.84	22.76	10	26.02	34.61	22.75	511	0.05
29	25.98	34.61	4.87	22.76	20	26.00	34.61	22.76	510	0.10
59	25.38	34.54	4.92	22.90	30	25.98	34.61	22.76	510	0.15
115	22.70	35.01	5.01	24.05	50	25.69	34.57	22.82	504	0.26
224	15.90	34.54	4.18	25.43	75	24.56	34.66	23.23	465	0.38
333	9.66	34.20	2.82	26.41	100	23.66	34.83	23.63	427	0.49
438	7.74	34.16	1.83	26.67	150	20.98	35.10	24.59	336	0.68
547	6.30	34.25	1.25	26.95	200	17.90	34.77	25.13	284	0.84
653	5.49	34.35	0.87	27.12	250	14.12	34.36	25.68	232	0.97
872	4.74	34.49	1.21	27.32	300	11.00	34.19	26.16	186	1.08
1086	3.88	34.50	1.24	27.42	400	8.37	34.18	26.59	145	1.25
1300	3.29	34.49	2.09	27.47	500	6.83	34.20	26.83	122	1.39
					600	5.80	34.31	27.05	102	1.51
					700	5.29	34.39	27.17	90	1.62
					800	4.97	34.46	27.27	81	1.71
					1000	4.20	34.50	27.38	70	1.88

HBL

HMS-10

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
15	HUGH M. SMITH; July 26, 1951; 0524 GCT; 21°02'N, 157°29'W; sounding, 30 fm; wind, 020°, 22 kt; weather, partly cloudy; sea, slight; wire angle, 00°.									
0	26.00	34.57	4.91	22.72	0	26.05	34.57		515	
10	26.08	34.61	4.92	22.74	10	26.08	34.61		513	
25	26.00	34.62	4.92	22.77	20	26.05	34.62		511	
35	25.83	34.58	4.88	22.79	30	25.94	34.61		509	
16	HUGH M. SMITH; July 26, 1951; 0840 GCT; 21°17'N, 157°26'W; sounding, 336 fm; wind, 040°, 28 kt; weather, missing; sea, rough; wire angle, 12°.									
0	25.60	34.56	4.95	22.86	0	25.57	34.56		501	
10	25.58	34.61	4.93	22.89	10	25.58	34.61		498	
24	25.58	34.57	4.92	22.86	20	25.58	34.58		500	
48	25.58	34.61	4.93	22.89	30	25.58	34.57		501	
96	23.36	34.99	5.12	23.84	50	25.58	34.62		497	
192	17.56	34.82	4.59	25.26	75	24.35	34.85		445	
287	12.41	34.24	3.99	25.94	100	23.27	35.00		404	
383	9.33a)	34.11	3.74	26.39	150	21.17	35.19		334	
383	9.39a)	34.11	-	26.38	200	17.10	34.76		266	
479	6.75	34.11	2.18	26.77	250	13.96	34.36		228	
					300	11.95	34.21		201	
					400	8.93	34.11		159	
17	HUGH M. SMITH; July 26, 1951; 1340 GCT; 21°45'N, 157°29'W; sounding, 1600 fm; wind, 040°, 18 kt; weather, rain; sea, moderate; wire angle, 15°.									
0	25.80	34.65	4.85	22.87	0	25.76	34.65	22.86	500	0.00
10	25.76	34.65	4.86	22.87	10	25.76	34.65	22.86	500	0.05
25	25.68	34.78	4.88	22.99	20	25.70	34.73	22.94	493	0.10
53	25.48	34.84	4.88	23.09	30	25.62	34.79	23.01	486	0.15
104	22.47	35.19	5.16	24.25	50	25.47	34.84	23.09	478	0.25
200	18.68	34.97	4.64	25.10	75	23.64	35.07	23.82	409	0.36
292	12.35	34.17	4.42	25.90	100	22.52	35.18	24.22	370	0.46
389	8.93a)	34.13	3.06	26.47	150	20.96	35.25	24.71	324	0.63
389	8.99a)	34.13	-	26.46	200	18.68	34.97	25.09	288	0.79
483	6.74	34.10	2.17	26.77	250	15.28	34.48	25.52	246	0.92
576	5.70	34.18	1.24	26.96	300	11.94	34.16	25.96	205	1.04
760	4.82	34.42	1.43	27.26	400	8.68	34.14	26.51	152	1.23
953	4.00	34.47	1.14	27.39	500	6.48	34.12	26.81	124	1.37
1142	3.38	34.49	1.44	27.46	600	5.60	34.20	26.99	108	1.49
					700	5.08	34.37	27.18	89	1.60
					800	4.66	34.43	27.28	80	1.69
					1000	3.87	34.48	27.40	68	1.86
18	HUGH M. SMITH; July 26, 1951; 1832 GCT; 22°08'N, 157°32'W; sounding, 2600 fm; wind, 070°, 22 kt; weather, cloudy; sea, moderate; wire angle, 35°.									
1	25.40	34.79	4.91	23.08	0	(25.40)	(34.79)	(23.08)	(480)	(0.00)
10	25.41	34.78	4.90	23.07	10	25.41	34.78	23.07	481	0.05
26	25.41	34.79	4.91	23.08	20	25.41	34.79	23.07	480	0.10
51	25.39	34.80	4.90	23.09	30	25.41	34.79	23.07	480	0.14
99	22.69	34.98	5.14	24.03	50	25.39	34.80	23.09	479	0.24
190	20.41	35.21	4.86	24.83	75	23.52	34.91	23.73	417	0.35
277	16.50	34.62	4.61	25.36	100	22.69	34.98	24.02	389	0.46
359	10.66	34.14	4.67	26.19	150	21.99	35.10	24.31	362	0.64
447	8.27a)	34.09	2.72	26.54	200	20.05	35.17	24.89	307	0.82
447	8.15a)	34.09	-	26.56	250	17.87	34.85	25.20	277	0.96
532	6.36	34.04	1.94	26.77	300	14.80	34.41	25.57	242	1.10
707	4.88	34.29	1.46	27.15	400	9.36	34.13	26.39	164	1.31
880	4.18	34.33	0.89	27.26	500	6.95	34.04	26.69	136	1.47
1058	3.58	- b)	-	-	600	5.58	34.15	26.95	111	1.60
					700	4.90	34.28	27.13	94	1.71
					800	4.43	34.32	27.22	86	1.80
					1000	3.78	34.37	27.32	76	1.98

a) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-salinity curve.

b) Value did not fit the temperature-salinity curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

19

HUGH M. SMITH; July 27, 1951; 0308 GCT; 21°51'N, 156°45'W; sounding, 2750 fm; wind, 090°, 18 kt; weather, overcast; sea, moderate; wire angle, 25°.

1	25.60	34.66	4.90	23.00	0	(25.57)	(34.66)	(22.93)	(494)	(0.00)
9	25.59	34.63	4.85	22.74	10	25.59	34.63	22.90	497	0.05
27	25.54	34.60	4.87	22.70	20	25.57	34.61	22.89	498	0.10
53	24.86	34.62	5.08	22.76	30	25.54	34.60	22.89	498	0.15
106	22.68	35.09	5.14	23.32	50	25.54	34.62	22.91	496	0.25
206	17.72	34.89	4.80	24.63	75	24.10	34.78	23.46	443	0.37
304	11.76	34.10	3.60	25.96	100	23.00	35.07	24.00	391	0.47
396	8.82	34.05	3.55	27.08	150	19.60	35.12	24.97	299	0.65
496	6.68	34.04	2.23	27.56	200	17.96	34.87	25.20	278	0.79
590	5.63	34.14	1.25	27.32	250	15.40	34.46	25.48	250	0.93
786	4.35	34.34	1.34	27.45	300	11.90	34.11	25.93	208	1.05
983	3.77	34.42	1.39	27.54	400	8.72	34.05	26.43	160	1.24
1182	3.34	- a)	-	-	500	6.60	34.04	26.73	132	1.39
					600	5.55	34.15	26.95	111	1.52
					700	4.80	34.28	27.14	93	1.63
					800	4.29	34.35	27.26	82	1.72
					1000	3.72	34.43	27.38	70	1.89

20

HUGH M. SMITH; July 27, 1951; 0938 GCT; 21°10'N, 156°35'W; sounding, 256 fm; wind, 060°, 3 kt; weather, missing; sea, slight; wire angle, missing.

0	25.20	34.78	4.87	23.14	0	25.19	34.78	474
10	25.20	34.76	4.88	23.12	10	25.20	34.76	476
24	25.20	34.77	4.88	23.13	20	25.20	34.76	476
49	25.06	34.78	4.88	23.18	30	25.19	34.77	475
99	23.28	35.03	5.12	23.90	50	25.05	34.78	470
197	19.54	35.09	4.63	24.97	75	24.22	34.86	440
295	11.10	34.11	4.30	26.08	100	23.27	35.03	401
344	9.77	34.14	3.38	26.34	150	21.38	35.20	339
					200	19.40	35.07	298
					250	14.55	34.37	239
					300	11.02	34.11	192

21

HUGH M. SMITH; July 27, 1951; 1340 GCT; 20°50'N, 156°45'W; sounding, 27 fm; wind, 060°, 6 kt; weather, missing; sea, smooth; wire angle, 00°.

0	25.80	34.59	4.80	22.82	0	25.77	34.59	505
10	25.65	34.57	4.82	22.84	10	25.65	34.57	503
25	25.66	34.57	4.80	22.84	20	25.65	34.57	503

22

HUGH M. SMITH; July 27, 1951; 1837 GCT; 20°20'N, 156°39'W; sounding, 1200 fm; wind, 060°, 24 kt; weather, partly cloudy; sea, moderate; wire angle, 38°.

1	25.80	34.64	4.93	22.84	0	(25.83)	(34.64)	(22.83)	(503)	(0.00)
8	25.86	34.63	4.86	22.82	10	25.86	34.63	22.81	505	0.05
22	25.87	- b)	4.88	-	20	25.87	34.62	22.80	506	0.10
45	25.86	34.61	4.84	22.81	30	25.87	34.61	22.80	506	0.15
86	25.00	34.68	4.92	23.12	50	25.86	34.61	22.80	506	0.25
162	19.99	34.98	4.72	24.77	75	25.70	34.61	22.85	502	0.38
240	16.16	34.65	4.31	25.46	100	23.60	34.88	23.68	422	0.50
318	11.15	34.20	3.54	26.14	150	20.43	34.99	24.65	329	0.69
400	8.58	34.20	2.28	26.58	200	17.50	34.79	25.25	273	0.84
481	6.86	34.22	1.33	26.85	250	14.50	34.45	25.67	232	0.97
654	5.56	34.45	1.65	27.20	300	11.95	34.22	26.01	200	1.08
833	4.77	34.45	1.02	27.29	400	8.58	34.20	26.57	147	1.26
1021	3.74	- a)	-	-	500	6.67	34.23	26.87	118	1.40
					600	5.89	34.34	27.06	100	1.52
					700	5.37	34.41	27.18	89	1.62
					800	4.92	34.44	27.26	82	1.72
					1000	3.85	34.48	27.41	68	1.88

a) Value did not fit the temperature-salinity curve.
b) Sample lost.

HBL

HMS-10

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
23	HUGH M. SMITH; July 27, 1951; 0017 GCT; 19°37'N, 156°40'W; sounding, 2550 fm; wind, 180°, 10 kt; weather, partly cloudy; sea, smooth; wire angle, 35°.									
0	26.40	34.62	4.84	22.65	0	26.38	34.62	22.64	521	0.00
9	25.82	34.66	4.86	22.86	10	25.81	34.66	22.85	501	0.05
25	25.52	34.66	4.87	22.95	20	25.60	34.66	22.92	495	0.10
50	23.82	34.69	4.98	23.48	30	25.27	34.66	23.02	485	0.15
96	22.27	35.08	5.04	24.22	50	23.82	34.69	23.48	441	0.24
180	16.92	34.83	4.93	25.42	75	23.04	34.93	23.88	402	0.35
255	12.48	34.33	3.77	26.00	100	22.17	35.08	24.25	368	0.45
329	9.58a)	34.18	2.96	26.40	150	18.96	35.02	25.06	290	0.61
329	9.64a)	34.18	-	26.39	200	15.28	34.64	25.65	235	0.75
406	7.85	34.17	2.07	26.66	250	12.70	34.35	25.96	205	0.86
490	6.98	34.24	1.17	26.85	300	10.65	34.21	26.24	179	0.96
632	5.85	34.40	1.13	27.12	400	7.92	34.17	26.65	139	1.12
789	5.18	34.44	1.00	27.23	500	6.90	34.26	26.87	119	1.26
964	4.32	34.44	1.17	27.33	600	6.08	34.38	27.07	100	1.38
					700	5.53	34.42	27.17	90	1.48
					800	5.11	34.44	27.24	84	1.58
					1000	(4.13)	(34.44)	(27.34)	(74)	(1.75)
24	HUGH M. SMITH; July 28, 1951; 0542 GCT; 19°02'N, 156°40'W; sounding, 2530 fm; wind, 120°, 18 kt; weather, cloudy; sea, moderate; wire angle, 15°.									
0	26.40	34.63	4.85	22.64	0	26.43	34.63	22.64	522	0.00
11	26.44	34.64	4.88	22.64	10	26.44	34.64	22.64	521	0.05
31	26.40	34.62	4.88	22.64	20	26.42	34.63	22.64	521	0.10
60	25.94	34.60	4.90	22.77	30	26.40	34.62	22.64	522	0.16
118	24.08	34.72	4.92	23.43	50	26.22	34.60	22.68	518	0.26
232	16.24	34.60	4.20	25.40	75	25.66	34.61	22.86	500	0.39
345	9.34	34.17	3.09	26.43	100	24.98	34.64	23.09	478	0.51
454	7.56	34.23	1.39	26.75	150	21.48	35.01	24.38	355	0.72
569	6.72	34.34	0.80	26.96	200	18.40	34.86	25.08	289	0.89
680	5.66	34.41	0.86	27.15	250	14.80	34.45	25.61	238	1.02
907	4.72	34.49	1.36	27.32	300	11.40	34.22	26.11	191	1.13
1127	3.98	34.51	1.18	27.42	400	8.15	34.20	26.64	140	1.30
1340	3.40	34.54	1.47	27.50	500	7.05	34.29	26.87	118	1.44
					600	6.49	34.36	27.00	106	1.56
					700	5.54	34.42	27.17	90	1.67
					800	5.05	34.46	27.26	82	1.76
					1000	4.40	34.50	27.36	72	1.94
25	HUGH M. SMITH; July 28, 1951; 1205 GCT; 18°22'N, 156°40'W; sounding, 2600 fm; wind, 040°, 21 kt; weather, missing; sea, rough; wire angle, 25°.									
0	25.80	34.67	4.88	22.86	0	25.84	34.67	22.85	501	0.00
7	25.84	34.65	4.85	22.84	10	25.85	34.65	22.83	503	0.05
21	25.86	34.67	4.86	22.85	20	25.86	34.67	22.84	502	0.10
42	25.84	34.69	4.84	22.87	30	25.85	34.68	22.86	501	0.15
80	25.50	34.68	4.90	22.97	50	25.84	34.69	22.87	500	0.25
150	22.04	34.91	5.05	24.16	75	25.50	34.68	22.96	490	0.38
218	18.12	34.82	4.51	25.12	100	25.32	34.68	23.02	485	0.50
278	12.84	34.28	3.84	25.89	150	22.04	34.91	24.15	377	0.72
338	9.51	34.18	3.05	26.41	200	19.38	34.91	24.87	309	0.89
395	7.94	34.19	2.00	26.67	250	15.45	34.50	25.50	248	1.03
511	6.38	34.42	1.54	27.06	300	11.55	34.22	26.08	193	1.15
645	5.60	34.39	0.87	27.14	400	7.84	34.19	26.68	137	1.32
811	4.86	34.44	1.00	27.27	500	6.48	34.41	27.04	102	1.45
					600	5.78	34.41	27.13	94	1.55
					700	5.33	34.40	27.18	89	1.65
					800	4.90	34.44	27.26	82	1.74
					1000	(4.10)	(34.50)	(27.40)	(69)	(1.91)

a) Thermometers did not agree within 0.02° C tolerance. Average value used in constructing temperature-salinity curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	Z m	T °C	S ‰	σ_t g/L	δ_T cl/ton	ΔD dyn m
HUGH M. SMITH; July 29, 1951; 0845 GCT; 18°10'N, 155°35'W; sounding, 2675 fm; wind, 080°, 20 kt; weather, missing; sea, moderate; wire angle, 17°.										26
0	25.20	34.60	4.88	23.00	0	25.20	34.60	22.99	488	0.00
10	25.22	34.69	4.88	23.06	10	25.22	34.69	23.06	482	0.05
29	25.22	34.61	4.88	23.00	20	25.22	34.66	23.03	484	0.10
56	25.01	34.63	4.93	23.08	30	25.22	34.61	23.00	487	0.14
112	22.14	35.04	5.10	24.23	50	25.12	34.62	23.03	484	0.24
218	14.04	34.35	3.61	25.69	75	23.52	34.87	23.70	420	0.36
323	9.03	34.19	2.82	26.50	100	22.60	35.00	24.06	385	0.46
424	7.31	34.22	1.33	26.78	150	20.40	35.06	24.72	324	0.64
529	6.52	34.36	1.08	27.00	200	16.67	34.68	25.36	262	0.79
631	5.78	34.40	0.71	27.13	250	11.30	34.21	26.12	190	0.90
840	4.74	34.49	1.08	27.32	300	9.57	34.19	26.41	163	0.99
1043	4.02	34.52	1.15	27.42	400	7.62	34.21	26.73	132	1.15
1246	3.54	34.54	1.25	27.49	500	6.73	34.33	26.94	112	1.28
					600	6.00	34.39	27.09	98	1.39
					700	5.38	34.44	27.20	87	1.49
					800	4.89	34.49	27.30	78	1.58
					1000	4.15	34.52	27.41	68	1.74
HUGH M. SMITH; July 29, 1951; 1820 GCT; 18°37'N, 154°27'W; sounding, 2900 fm; wind, 070°, 14 kt; weather, cloudy; sea, slight; wire angle, 35°.										27
0	25.20	34.61	4.86	23.00	0	25.21	34.61	23.00	487	0.00
9	25.23	34.56	4.85	22.96	10	25.23	34.56	22.96	491	0.05
26	25.24	34.56	4.85	22.96	20	25.24	34.56	22.95	492	0.10
51	24.56	34.55	4.97	23.16	30	25.24	34.56	22.95	492	0.15
97	22.50	35.00	5.09	24.10	50	24.57	34.55	23.15	472	0.24
188	16.54	34.76	4.63	25.46	75	23.22	34.88	23.79	411	0.36
276	10.34	34.16	3.12	26.26	100	22.42	35.01	24.12	380	0.46
359	- a)	- b)	1.31	-	150	19.65	35.04	24.90	306	0.63
444	7.42	34.34	0.74	26.86	200	15.35	34.61	25.61	238	0.77
527	6.87	34.38	0.42	26.97	250	11.20	34.18	26.12	190	0.88
701	5.46	34.44	0.92	27.20	300	9.80	34.18	26.36	167	0.97
884	4.82	34.47	0.64	27.30	400	7.98	34.30	26.74	130	1.12
1075	4.14	34.41	0.68	27.33	500	7.05	34.36	26.92	113	1.25
					600	6.26	34.41	27.07	100	1.37
					700	5.47	34.44	27.19	88	1.47
					800	5.10	34.46	27.25	82	1.56
					1000	4.40	34.46	27.33	75	1.74
HUGH M. SMITH; July 29, 1951; 2330 GCT; 19°13'N, 154°30'W; sounding, 3000 fm; wind, 050°, 18 kt; weather, cloudy; sea, moderate; wire angle, 27°.										28
0	25.30	34.60	4.89	22.97	0	25.28	34.60	22.97	490	0.00
9	25.26	34.60	4.92	22.98	10	25.25	34.60	22.98	489	0.05
27	25.16	34.60	4.93	23.01	20	25.20	34.60	22.99	488	0.10
53	25.13	34.59	4.90	23.01	30	25.16	34.60	23.01	486	0.15
104	22.68	35.10	5.19	24.12	50	25.13	34.59	23.01	486	0.24
204	17.54	34.78	4.50	25.23	75	24.05	34.73	23.44	445	0.36
303	10.28	34.16	3.56	26.27	100	22.82	35.07	24.05	386	0.47
398	8.95c)	- b)	0.80	-	150	20.52	35.10	24.71	324	0.65
497	7.65	34.35	0.54	26.84	200	17.72	34.82	25.22	276	0.80
593	6.62	34.38	0.44	27.00	250	13.50	34.30	25.76	224	0.93
795	5.32	34.47	0.91	27.24	300	10.38	34.16	26.25	178	1.03
997	4.30	34.46	0.90	27.35	400	8.95	34.22	26.53	151	1.20
1202	3.76	34.49	2.38	27.43	500	7.62	34.36	26.84	121	1.34
					600	6.55	34.38	27.01	106	1.47
					700	5.87	34.42	27.13	94	1.58
					800	5.30	34.48	27.24	83	1.67
					1000	4.25	34.46	27.35	73	1.85

a) Values did not fit the temperature-depth curve.
b) Value did not fit the temperature-salinity curve.
c) Alternate value, 9.01°C. Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

HBL

HMS-10

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
29	HUGH M. SMITH; July 30, 1951; 0530 GCT; 19°55'N, 154°29'W; sounding, missing; wind, 020°, 13 kt; weather, overcast; sea, slight; wire angle, 25°.									
0	25.30	34.63	4.85	22.98	0	25.33	34.63	22.98	489	0.00
10	25.34	34.65	4.89	22.99	10	25.34	34.65	22.99	488	0.05
27	25.30	34.65	4.88	23.01	20	25.31	34.65	23.00	487	0.10
54	24.44	34.54	5.08	23.18	30	25.29	34.65	23.01	487	0.15
106	22.45	34.98	5.04	24.10	50	25.12	34.54	22.97	489	0.24
210	17.92	34.77	4.46	25.14	75	23.19	34.79	23.74	417	0.36
311	10.41	34.22	2.81	26.29	100	22.55	34.96	24.05	387	0.46
408	9.19a)	- b)	1.05	-	150	21.25	35.08	24.50	344	0.64
510	7.21	34.30	0.83	26.86	200	18.75	34.86	24.99	297	0.81
609	6.48	34.39	0.62	27.03	250	13.70	34.34	25.75	225	0.94
816	5.08	34.46	1.08	27.26	300	10.67	34.22	26.24	178	1.04
1023	4.33	34.49	0.91	27.37	400	9.22	34.24	26.50	153	1.22
1231	3.70	- b)	-	-	500	7.33	34.29	26.83	122	1.36
					600	6.51	34.38	27.01	105	1.49
					700	5.79	34.43	27.15	92	1.59
					800	5.16	34.46	27.25	83	1.69
					1000	4.86	34.49	27.30	77	1.87
30	HUGH M. SMITH; July 30, 1951; 1115 GCT; 20°30'N, 154°30'W; sounding, 3000 fm; wind, 080°, 22 kt; weather, missing; sea, moderate; wire angle, 25°.									
0	25.30	34.63	4.89	22.99	0	25.32	34.63	22.98	489	0.00
9	25.33	34.61	4.88	22.97	10	25.33	34.61	22.96	490	0.05
27	25.32	34.62	4.89	22.98	20	25.32	34.62	22.97	490	0.10
53	25.25	34.59	4.91	22.98	30	25.31	34.62	22.98	489	0.15
106	22.57	34.94	5.16	24.03	50	25.28	34.59	22.96	490	0.24
208	18.38	34.88	4.55	25.10	75	23.75	34.66	23.47	442	0.36
309	11.06	34.19	3.09	26.15	100	22.73	34.91	23.96	395	0.47
407	9.00c)	- b)	1.22	-	150	21.50	35.12	24.46	348	0.66
510	6.90	34.23	1.16	26.85	200	19.00	34.94	24.99	298	0.82
608	6.13	34.33	0.72	27.03	250	15.10	34.49	25.57	242	0.96
816	5.04	34.50	1.21	27.30	300	11.48	34.20	26.08	194	1.07
1023	4.33	34.51	1.03	27.38	400	9.14	34.19	26.48	156	1.25
1229	3.69	- b)	- d)	-	500	7.05	34.22	26.81	124	1.40
					600	6.19	34.32	27.01	105	1.52
					700	5.60	34.44	27.18	90	1.63
					800	5.10	34.49	27.28	80	1.72
					1000	4.39	34.51	27.37	71	1.89
31	HUGH M. SMITH; July 30, 1951; 1700 GCT; 21°06'N, 154°54'W; sounding, missing; wind, 070°, 18 kt; weather, cloudy; sea, slight; wire angle, 10°.									
0	25.60	34.95	4.78	23.13	0	25.64	34.95	23.12	475	0.00
10	25.64	34.96	4.82	23.14	10	25.64	34.96	23.13	475	0.05
31	25.68	34.96	4.82	23.12	20	25.66	34.96	23.13	475	0.10
61	23.60	34.97	5.21	23.76	30	25.68	34.96	23.12	476	0.14
120	20.94	35.27	4.94	24.73	50	25.63	34.96	23.13	474	0.24
235	14.92	34.50	4.62	25.62	75	23.25	35.05	23.91	400	0.35
349	9.52	34.14	3.12	26.38	100	21.93	35.24	24.43	350	0.44
457	6.92	34.05	2.06	26.71	150	19.97	35.18	24.92	304	0.61
569	5.44	34.14	1.10	26.98	200	17.38	34.83	25.31	267	0.75
679	4.84	34.23	0.64	27.11	250	13.92	34.39	25.75	225	0.88
900	4.20	34.50	1.46	27.39	300	11.38	34.21	26.11	191	0.99
1117	3.62	34.50	1.40	27.45	400	8.20	34.08	26.54	150	1.16
1330	3.16	34.55	1.60	27.53	500	6.23	34.07	26.81	125	1.31
					600	5.22	34.16	27.00	106	1.43
					700	4.78	34.25	27.12	95	1.54
					800	4.48	34.34	27.23	85	1.64
					1000	3.95	34.50	27.41	67	1.80

a) Alternate value, 9.04°C. Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

b) Value did not fit the temperature-salinity curve.

c) Alternate value, 9.06°C. Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

d) Value did not fit the temperature-oxygen curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; July 30, 1951; 2107 GCT; 21°25'N, 155°30'W; sounding, missing; wind, 100°, 21 kt; weather, overcast; sea, moderate; wire angle, 16°.										32
0	25.50	34.68	4.90	22.96	0	25.53	34.68	22.95	491	0.00
10	25.53	34.65	4.92	22.94	10	25.53	34.65	22.93	494	0.05
30	25.46	34.64	4.90	22.95	20	25.50	34.64	22.93	494	0.10
59	24.92	34.64	5.07	23.12	30	25.46	34.64	22.95	492	0.15
116	21.66	34.96	5.01	24.30	50	25.43	34.64	22.95	491	0.25
233	12.44	34.24	4.26	25.94	75	24.23	34.69	23.35	453	0.36
346	9.04	34.23	2.39	26.53	100	22.75	34.84	23.90	401	0.47
455	6.36	34.08	1.89	26.80	150	19.43	34.94	24.88	308	0.65
568	5.42	34.22	0.70	27.03	200	14.50	34.40	25.63	236	0.79
678	5.00	34.38	0.85	27.21	250	11.83	34.23	26.04	198	0.90
903	4.38	34.49	1.04	27.36	300	10.40	34.24	26.31	172	1.00
1122	3.74	34.52	1.33	27.45	400	7.47	34.12	26.68	137	1.16
1337	3.27	34.52	1.44	27.50	500	5.88	34.12	26.89	117	1.29
					600	5.26	34.29	27.10	97	1.40
					700	4.95	34.40	27.22	85	1.50
					800	4.67	34.45	27.29	78	1.59
					1000	4.09	34.52	27.41	67	1.76
HUGH M. SMITH; July 31, 1951; 0901 GCT; 21°51'N, 156°45'W; sounding, 2700 fm; wind, 060°, 21 kt; weather, missing; sea, slight; wire angle, 20°.										33
1	25.50	34.73	4.88	23.01	0	(25.48)	(34.73)	(23.01)	(486)	(0.00)
10	25.49	34.71	4.90	22.99	10	25.49	34.71	22.99	488	0.05
28	25.49	34.70	4.89	22.98	20	25.49	34.70	22.98	489	0.10
56	25.40	34.69	4.94	23.01	30	25.48	34.70	22.98	488	0.15
112	22.36	35.15	5.17	24.25	50	25.43	34.69	22.99	488	0.24
221	15.90	- a)	4.18	-	75	23.75	34.84	23.61	429	0.36
330	11.16	34.23	4.91	26.17	100	22.65	35.08	24.11	381	0.46
434	8.28	34.13	2.66	26.57	150	20.15	35.18	24.87	308	0.64
543	6.15	34.09	1.66	26.84	200	17.07	34.77	25.33	264	0.78
647	5.18	34.20	0.95	27.04	250	14.52	34.46	25.67	232	0.91
864	4.26	34.44	1.44	27.34	300	12.42	34.28	25.96	205	1.02
1077	3.64	34.49	1.27	27.44	400	9.12	34.17	26.46	157	1.21
1287	3.16	34.51	1.65	27.50	500	6.90	34.09	26.73	132	1.36
					600	5.55	34.14	26.95	112	1.49
					700	4.86	34.29	27.15	92	1.60
					800	4.45	34.40	27.28	80	1.70
					1000	3.89	34.48	27.40	68	1.86

a) No sample.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m	
HUGH M. SMITH; September 25, 1951; 1818 GCT; 4°57'S, 150°04'W; sounding, missing; wind, 110°, 18 kt; weather, partly cloudy; sea, slight; wire angle, 35°.												28
0	27.10	35.55	4.55		23.13	0	27.10	35.55	23.13	476	0.00	
9	27.10	35.57	4.56		23.14	10	27.10	35.57	23.14	474	0.05	
21	27.10	35.59	4.56		23.15	20	27.10	35.59	23.15	473	0.10	
44	27.10	35.57	4.50		23.14	30	27.10	35.59	23.15	473	0.14	
86	27.11	35.59	4.56		23.15	50	27.10	35.57	23.14	474	0.24	
164	21.93	35.60	4.56		24.71	75	27.10	35.58	23.14	474	0.36	
237	13.37	35.02	1.87		26.35	100	27.08	35.59	23.16	472	0.48	
312	10.92	- a)	- a)		-	150	23.32	35.61	24.32	361	0.69	
386	9.70	34.71	1.75		26.79	200	18.83	35.48	25.45	254	0.84	
459	8.84	34.64	1.30		26.88	250	12.74	34.98	26.45	159	0.94	
597	7.26	34.61	1.93		27.10	300	11.17	34.83	26.63	142	1.02	
749	6.03	34.53	2.16		27.20	400	9.53	34.70	26.82	124	1.15	
921	5.12	34.54	2.48		27.32	500	8.30	34.63	26.96	111	1.28	
						600	7.20	34.61	27.11	97	1.39	
						700	6.38	34.55	27.17	91	1.49	
						800	5.74	34.54	27.24	84	1.59	
						1000	(4.87)	(34.54)	(27.35)	(74)	(1.80)	
HUGH M. SMITH; September 26, 1951; 0916 GCT; 4°00'S, 150°00'W; sounding, missing; wind, 090°, 8 kt; weather, clear; sea, smooth; wire angle, 25°.												29
1	27.09	35.61	4.56	0.64	23.17	0	(27.09)	(35.61)	(23.17)	(471)	(0.00)	
10	27.10	35.62	4.58	0.61	23.17	10	27.10	35.62	23.17	471	0.05	
28	27.03	35.63	4.63	0.61	23.20	20	27.08	35.63	23.19	469	0.09	
54	27.02	35.64	4.64	0.60	23.21	30	27.03	35.63	23.20	468	0.14	
105	26.98	35.63	4.60	0.70	23.22	50	27.02	35.64	23.21	467	0.24	
211	12.37	34.99	1.86	1.96	26.53	75	27.00	35.64	23.22	461	0.35	
318	10.82	34.81	2.43	2.02	26.68	100	26.98	35.63	23.22	466	0.47	
422	9.26	34.69	1.94	2.22	26.85	150	20.89	35.58	24.98	298	0.67	
531	8.25	34.63	1.77	2.60	26.97	200	12.78	35.04	26.48	156	0.78	
635	6.94	34.52	1.33	2.75	27.07	250	11.70	34.90	26.58	146	0.86	
848	5.52	34.51	1.98	2.77	27.25	300	11.04	34.83	26.65	140	0.94	
1058	4.38	34.56	2.18	2.70	27.42	400	9.58	34.71	26.81	124	1.08	
1265	3.70	- b)	2.38	2.39	-	500	8.51	34.65	26.94	113	1.20	
						600	7.37	34.55	27.03	104	1.32	
						700	6.48	34.51	27.13	95	1.43	
						800	5.83	34.51	27.21	87	1.53	
						1000	4.66	34.54	27.37	72	1.71	
HUGH M. SMITH; September 26, 1951; 1815 GCT; 3°00'S, 149°57'W; sounding, missing; wind, 090°, 9 kt; weather, partly cloudy; sea, smooth; wire angle, 08°.												30
3	27.30	35.60	4.68	0.70	23.09	0	(27.30)	(35.60)	(23.10)	(478)	(0.00)	
13	27.22	35.61	4.62	0.68	23.13	10	27.25	35.61	23.12	476	0.05	
29	27.17	35.59	4.57	0.65	23.13	20	27.20	35.60	23.13	475	0.10	
58	27.16	35.58	4.53	0.69	23.12	30	27.17	35.59	23.13	475	0.14	
112	26.78	35.64	4.53	0.72	23.29	50	27.16	35.58	23.13	475	0.24	
220	11.66	34.91	1.74	2.00	26.60	75	27.12	35.59	23.14	474	0.36	
327	10.95	34.81	1.57	- c)	26.66	100	26.93	35.61	23.22	466	0.48	
438	9.83	34.78	1.99	-	26.83	150	20.25	35.55	25.13	284	0.68	
545	7.84	34.63	1.12	-	27.03	200	11.96	34.95	26.58	147	0.79	
651	6.65	34.58	1.55	-	27.16	250	11.42	34.87	26.61	143	0.86	
858	5.25	34.54	1.96	-	27.30	300	11.10	34.82	26.63	141	0.94	
1066	4.11	- a)	- a)	-	-	400	10.28	34.79	26.76	129	1.08	
1264	3.66	34.55	2.32	-	27.48	500	8.61	34.68	26.95	112	1.21	
						600	7.16	34.60	27.10	97	1.32	
						700	6.29	34.56	27.19	89	1.42	
						800	5.60	34.54	27.26	82	1.52	
						1000	4.50	34.62	27.45	64	1.69	

a) Unreasonable chemical values suggest Nansen bottle leakage.
b) Salinity sample bottle empty.
c) Phosphate sample invalid owing to addition of wrong reagents.

HBL

HMS-II

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
31	HUGH M. SMITH; September 27, 1951; 0241 GCT; 2°00'S, 150°02'W; sounding, missing; wind, 120°, 9 kt; weather, partly cloudy; sea, smooth; wire angle, 08°.										
0	27.50	35.49	4.49	0.65	22.95	0	27.50	35.49	22.95	492	0.00
10	27.02	35.53	4.73	0.84	23.13	10	27.02	35.53	23.13	475	0.05
25	26.96	35.48	4.50	0.69	23.11	20	26.98	35.50	23.12	476	0.10
56	26.87	35.51	4.50	0.65	23.17	30	26.94	35.48	23.12	476	0.14
110	26.62	35.50	4.33	0.64	23.24	50	26.88	35.49	23.15	473	0.24
217	12.08	34.94	1.05	2.02	26.54	75	26.81	35.51	23.18	470	0.36
322	11.20	34.82	1.76	2.02	26.62	100	26.72	35.51	23.21	467	0.48
433	10.16	34.74	2.03	2.07	26.74	150	19.31	35.51	25.35	264	0.67
539	8.02	34.60	0.81	2.72	26.98	200	12.42	34.98	26.51	153	0.78
645	6.74	34.57	1.45	2.68	27.14	250	11.80	34.91	26.57	147	0.85
852	5.10	34.52	1.93	2.75	27.31	300	11.37	34.84	26.60	144	0.93
1059	4.24	- a)	- a)	- a)	-	400	10.54	34.77	26.69	136	1.08
1263	3.58	34.59	2.26	2.69	27.52	500	8.77	34.64	26.89	117	1.22
						600	7.23	34.58	27.08	99	1.33
						700	6.26	34.55	27.19	89	1.44
						800	5.43	34.52	27.26	82	1.53
						1000	4.42	34.76	27.57	53	1.69
32	HUGH M. SMITH; September 27, 1951; 1129 GCT; 1°00'S, 149°58'W; sounding, missing; wind, 130°, 9 kt; weather, missing; sea, smooth; wire angle, 28°.										
0	26.40	35.29	4.33	0.64	23.15	0	26.40	35.29	23.15	474	0.00
8	26.38	35.28	4.34	0.65	23.14	10	26.38	35.28	23.15	474	0.05
21	26.36	35.30	4.28	0.65	23.17	20	26.36	35.30	23.17	472	0.10
47	26.24	35.30	4.16	0.68	23.20	30	26.30	35.30	23.19	470	0.14
93	26.32	35.52	3.94	0.72	23.35	50	26.24	35.30	23.20	468	0.24
186	15.04	35.26	2.78	1.34	26.18	75	26.28	35.46	23.31	458	0.35
280	11.78	34.88	1.82	2.08	26.55	100	26.30	35.52	23.35	454	0.47
376	10.14	- a)	- a)	- a)	-	150	18.55	35.47	25.51	248	0.64
471	8.50	34.64	1.00	2.69	26.93	200	14.32	35.18	26.28	175	0.75
563	7.51	34.60	1.02	2.80	27.05	250	12.52	34.97	26.48	156	0.84
750	6.02	34.56	1.78	2.78	27.22	300	11.40	34.84	26.59	145	0.92
943	4.82	- a)	- a)	- a)	- a)	400	9.72	34.72	26.80	126	1.05
1135	4.04	- a)	- a)	- a)	- a)	500	8.14	34.63	26.98	108	1.17
						600	7.17	34.58	27.09	98	1.28
						700	6.37	34.56	27.18	90	1.39
						800	5.69	34.58	27.28	80	1.48
						1000	4.50	34.81	27.60	50	1.64
33	HUGH M. SMITH; September 27, 1951; 2029, 2120 GCT; 0°02'N, 150°00'W; sounding, missing; wind, 120°, 17 kt; weather, partly cloudy; sea, slight; wire angle, 65°, 32°.										
0	27.20	35.21	4.53	0.37	22.83	0	27.20	35.21	22.83	503	
						10	27.03	35.17	22.86	501	
14	26.98	35.17	4.54	0.34	22.87	20	26.82	35.17	22.92	494	
31	26.56	35.19	4.38	0.39	23.02	30	26.56	35.19	23.02	485	
63	25.93	35.20	4.15	0.46	23.23	50	26.17	35.20	23.15	473	
122	19.95b)	35.28	3.29	1.07	25.01	75	25.70	35.20	23.30	459	
233c)	26.16b)	35.07	3.24	1.11	23.06	100	25.20	35.20	23.45	444	
						150	18.87	35.26	25.28	271	
						200	13.70	35.04	26.30	173	

a) Unreasonable chemical values suggest Nansen bottle leakage.
b) Thermometer wrong break suspected.
c) Values below 233 meters discarded; pretrip suspected. Depths uncertain.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; September 28, 1951; 0744, 0811, 0845 GCT; 1°02'N, 150°01'W; sounding, missing; wind, 090°, 16 kt; weather, missing; sea, slight; wire angle, 57°, 57°, 64°. 34

0	27.30	35.14	4.59	0.32	22.74	0	27.30	35.14	22.74	512	
9	27.36	35.16	4.58	0.29	22.74	10	27.36	35.16	22.74	512	
19	27.36	35.17	4.59	0.29	22.75	20	27.36	35.17	22.75	511	
38	27.33	35.16	4.55	0.26	22.76	30	27.36	35.16	22.74	512	
70	26.62	35.22	4.49	0.39	23.03	50	27.21	35.17	22.80	506	
						75	26.60	35.22	23.03	484	
118	25.05	35.12	4.08	0.61	23.44	100	25.72	35.17	23.27	462	
167	15.80	34.73	2.65	1.25	25.60	150	18.25	34.76	25.05	292	
						200	13.29	34.73	26.14	188	
215	12.74	34.74	2.48	1.51	26.26	250	12.32	34.85	26.43	161	
256	12.16	34.87	0.86	2.05	26.48	300	11.69	34.81	26.52	152	
309	11.58	34.80	0.68	2.12	26.53	400	9.69	34.69	26.78	128	
415a)	9.46	34.68	1.38	2.19	26.81						

HUGH M. SMITH; September 28, 1951; 1802 GCT; 2°01'N, 149°53'W; sounding, missing; wind, 080°, 16 kt; weather, partly cloudy; sea, slight; wire angle, 40°. 35

0	27.40	34.93	4.51	0.43	22.54	0	27.40	34.93	22.54	530	0.00
8	27.44	34.94	4.50	-	22.55	10	27.44	34.94	22.55	530	0.05
18	27.46	34.94	4.52	0.44	22.55	20	27.46	34.94	22.55	531	0.11
38	27.45	34.96	4.48	0.45	22.56	30	27.45	34.95	22.56	530	0.16
74	27.30	34.95	4.47	0.48	22.61	50	27.42	34.96	22.57	528	0.26
141	24.97	35.12	4.01	0.69	23.46	75	27.30	34.95	22.61	525	0.40
202	12.34	34.85	1.54	1.92	26.43	100	26.90	35.19	22.91	496	0.53
267	11.84	34.85	1.53	1.98	26.52	150	22.30	34.93	24.10	382	0.75
331	11.13	34.79	1.18	2.24	26.61	200	12.42	34.85	26.41	163	0.89
395	10.42	34.73	1.83	2.07	26.69	250	11.98	34.86	26.50	154	0.98
522	8.44	34.63	1.04	2.58	26.93	300	11.48	34.82	26.56	148	1.05
658	6.74	- b)	- b)	- b)	-	400	10.37	34.73	26.70	136	1.20
817	5.32	34.70	1.76	2.28	27.42	500	8.72	34.64	26.90	116	1.34
						600	7.40	34.60	27.07	100	1.46
						700	6.32	34.62	27.23	85	1.56
						800	5.48	34.69	27.40	69	1.65
						1000	(4.04)	(34.55)	(27.45)	(64)	(1.80)

HUGH M. SMITH; September 29, 1951; 0238 GCT; 3°00'N, 150°03'W; sounding, 2500 fm; wind, 090°, 16 kt; weather, partly cloudy; sea, slight; wire angle, 42°. 36

0	27.30	35.12	4.61	0.31	22.73	0	27.30	35.12	22.73	513	0.00
8	27.32	35.11	4.64	0.30	22.72	10	27.28	35.11	22.73	513	0.05
21	27.16	35.10	4.62	0.31	22.76	20	27.16	35.10	22.76	510	0.10
42	27.13	35.09	4.62	0.32	22.77	30	27.15	35.09	22.76	510	0.15
80	26.95	35.11	4.58	0.34	22.84	50	27.11	35.09	22.77	509	0.26
156	24.49	35.08	3.88	0.60	23.57	75	26.98	35.10	22.82	505	0.38
234	11.52	34.79	0.91	1.79	26.54	100	26.87	35.12	22.87	500	0.51
309	10.60	34.74	1.92	2.10	26.66	150	25.85	35.16	23.22	466	0.75
388	9.74	34.66	1.59	2.13	26.75	200	13.12	34.77	26.21	182	0.92
467	8.89	34.61	1.33	2.29	26.85	250	11.33	34.79	26.57	148	1.00
636	6.86	34.52	0.95	2.92	27.08	300	10.70	34.75	26.65	140	1.08
812	5.58	- b)	- b)	- b)	-	400	9.62	34.65	26.76	129	1.22
996	4.66	34.57	1.17	2.61	27.39	500	8.48	34.59	26.90	116	1.35
						600	7.28	34.53	27.03	104	1.47
						700	6.30	34.59	27.21	87	1.58
						800	5.62	34.68	27.37	72	1.66
						1000	(4.62)	(34.57)	(27.40)	(69)	(1.81)

a) Values below 415 meters discarded. Depths and temperatures uncertain, possibly owing to excessive wire angle. Unreasonable chemical values suggest Nansen bottle leakage.
b) Unreasonable chemical values suggest Nansen bottle leakage.

HBL

HMS–11

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
37	HUGH M. SMITH; September 29, 1951; 1117 GCT; 3°58'N, 150°00'W; sounding, 2700 fm; wind, 110°, 13 kt; weather, partly cloudy; sea, slight; wire angle, 30°.										
0	27.20	35.04	4.54	0.38	22.71	0	27.20	35.04	22.71	516	0.00
9	27.19	35.04	4.53	0.44	22.71	10	27.19	35.04	22.71	515	0.05
23	27.19	35.05	4.55	0.41	22.72	20	27.19	35.05	22.72	515	0.10
47	27.12	35.09	4.55	0.40	22.77	30	27.17	35.06	22.73	513	0.16
92	26.71	35.14	4.42	0.61	22.94	50	27.10	35.09	22.78	509	0.26
180	17.15	34.70	2.73	1.09	25.27	75	26.90	35.14	22.88	499	0.38
267	9.98	34.58	2.27	2.00	26.65	100	26.65	35.14	22.96	492	0.51
360	9.15	34.62	1.63	2.18	26.82	150	24.88	35.10	23.48	442	0.74
451	8.57	34.61	1.66	2.30	26.90	200	14.24	34.60	25.85	216	0.90
542	7.77	34.58	1.09	2.81	27.00	250	10.26	34.58	26.60	145	1.00
725	6.20	34.51	1.34	2.88	27.16	300	9.68	34.60	26.71	134	1.07
914	5.10	34.66	2.40	2.05	27.42	400	8.91	34.62	26.85	121	1.20
1103	4.34	34.69	2.43	1.68	27.52	500	8.13	34.60	26.96	110	1.33
						600	7.21	34.55	27.06	101	1.44
						700	6.38	34.51	27.14	94	1.55
						800	5.72	34.57	27.27	81	1.65
						1000	4.60	34.68	27.49	60	1.81
38	HUGH M. SMITH; September 29, 1951; 2005 GCT; 4°59'N, 149°56'W; sounding, 2600 fm; wind, 080°, 11 kt; weather, overcast; sea, slight; wire angle, 20°.										
0	28.20	35.00	4.47	0.06	22.37	0	28.20	35.00	22.37	550	0.00
9	28.10	34.98	4.39	0.08	22.37	10	28.10	34.98	22.37	548	0.06
23	28.08	34.98	4.43	0.06	22.38	20	28.08	34.98	22.38	547	0.11
51	27.76	35.10	4.53	0.14	22.57	30	28.01	35.00	22.41	544	0.16
102	26.46	35.16	4.31	0.33	23.03	50	27.76	35.10	22.57	529	0.27
206	13.38	34.58	1.85	1.50	26.01	75	27.28	35.14	22.75	511	0.40
309	9.29	34.63	1.70	2.03	26.80	100	26.49	35.16	23.02	485	0.53
417	8.54	34.59	1.41	2.24	26.89	150	25.09	35.11	23.42	448	0.76
522	7.94	34.54	1.03	2.47	26.94	200	13.89	34.59	25.91	210	0.93
625	7.07	34.54	0.85	2.69	27.07	250	10.72	34.62	26.55	150	1.02
830	5.56	34.50	0.84	2.76	27.23	300	9.41	34.63	26.78	128	1.10
1036	4.49	34.51	1.29	2.73	27.37	400	8.67	34.61	26.88	118	1.22
1242	3.74	34.51	1.07	2.66	27.44	500	8.10	34.55	26.93	114	1.35
						600	7.28	34.54	27.04	103	1.47
						700	6.46	34.52	27.14	94	1.57
						800	5.73	34.50	27.21	86	1.67
						1000	4.59	34.51	27.36	73	1.86
39	HUGH M. SMITH; September 30, 1951; 0439 GCT; 5°56'N, 150°00'W; sounding, 2600 fm; wind, 070°, 14 kt; weather, partly cloudy; sea, slight; wire angle, 10°.										
0	28.90	34.53	4.42	0.30	21.78	0	28.90	34.53	21.78	606	0.00
10	28.86	34.53	4.46	0.31	21.78	10	28.86	34.53	21.78	604	0.06
25	28.84	34.52	4.48	0.32	21.78	20	28.85	34.52	21.78	604	0.12
49	28.80	34.52	4.48	0.41	21.79	30	28.83	34.52	21.78	604	0.18
98	26.38	35.00	3.82	0.78	22.93	50	28.80	34.52	21.79	603	0.30
200	11.42	34.65	0.81	2.47	26.45	75	28.02	34.74	22.21	562	0.45
294	9.54	34.64	1.17	2.56	26.77	100	26.30	35.00	22.96	491	0.58
391	8.71	34.63	1.16	2.61	26.89	150	17.50	34.61	25.12	286	0.78
485	7.97	34.57	0.95	2.77	26.96	200	11.42	34.65	26.45	159	0.89
585	7.16	34.52	0.78	2.98	27.04	250	10.24	34.64	26.65	140	0.97
782	5.60	34.52	0.90	2.54	27.24	300	9.50	34.64	26.76	128	1.04
954	4.62	34.62	1.50	2.67	27.44	400	8.61	34.62	26.90	116	1.17
1136	3.98	34.55	1.51	3.02	27.45	500	7.81	34.56	26.97	109	1.29
						600	7.01	34.51	27.05	102	1.40
						700	6.20	34.52	27.17	91	1.51
						800	5.49	34.53	27.27	81	1.60
						1000	4.54	34.62	27.45	64	1.77

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; September 30, 1951; 1310 GCT; 6°51'N, 149°57'W; sounding, 2600 fm; wind, 060°, 18 kt; weather, rain; sea, moderate; wire angle, 15°.											40
0	28.80	34.39	4.34	0.32	21.68	0	28.80	34.39	21.68	612	0.00
11	28.86	34.42	4.48	0.36	21.70	10	28.86	34.42	21.70	612	0.06
23	28.86	34.40	4.48	0.35	21.68	20	28.86	34.41	21.69	613	0.12
48	28.87	34.44	4.51	0.34	21.71	30	28.86	34.40	21.68	613	0.18
95	22.38	34.83	4.10	0.51	24.00	50	28.85	34.44	21.72	610	0.31
190	11.10	34.64	0.72	2.45	26.50	75	27.30	34.86	22.54	532	0.45
276	9.58	34.66	0.98	2.59	26.78	100	21.22	34.77	24.28	365	0.56
370	8.93	34.61	1.21	2.55	26.84	150	12.92	34.47	26.02	200	0.70
458	8.24	34.60	1.12	2.73	26.94	200	10.84	34.65	26.54	149	0.79
553	7.43	34.54	0.79	2.94	27.02	250	9.85	34.66	26.72	132	0.87
738	5.60	34.50	1.22	3.06	27.23	300	9.40	34.65	26.81	126	0.93
923	4.84	34.54	1.34	2.57	27.35	400	8.70	34.61	26.91	118	1.06
1114	4.10	34.60	1.17	2.46	27.48	500	7.90	34.57	26.97	109	1.18
						600	6.92	34.52	27.07	100	1.30
						700	5.91	34.50	27.19	89	1.40
						800	5.28	34.51	27.28	80	1.50
						1000	4.64	34.55	27.38	71	1.66
HUGH M. SMITH; September 30, 1951; 2229 GCT; 7°51'N, 149°57'W; sounding, 2900 fm; wind, 060°, 16 kt; weather, cloudy; sea, moderate; wire angle, 15°.											41
0	28.60	34.34	4.52	0.36	21.72	0	28.60	34.34	21.72	610	0.00
11	28.58	34.34	4.55	0.40	21.73	10	28.58	34.34	21.73	609	0.06
25	28.54	34.33	4.56	0.39	21.73	20	28.56	34.33	21.73	609	0.12
54	27.09	34.90	4.51	0.46	22.64	30	28.50	34.35	21.76	606	0.18
107	12.98	34.41	1.59	2.18	25.96	50	27.72	34.77	22.33	551	0.30
212	10.46	34.67	0.64	2.71	26.63	75	23.73	34.86	23.64	427	0.42
316	9.57	34.67	0.53	2.76	26.79	100	15.40	34.48	25.50	249	0.51
420	8.72	34.59	0.71	2.78	26.86	150	11.41	34.60	26.41	163	0.60
520	7.62	34.54	0.64	3.19	26.99	200	10.59	34.67	26.61	144	0.68
622	6.51	34.52	0.95	3.14	27.13	250	10.13	34.68	26.70	135	0.75
826	5.22	34.52	0.73	3.19	27.29	300	9.70	34.68	26.77	128	0.82
1032	4.30	34.54	1.40	3.04	27.41	400	8.90	34.60	26.84	122	0.95
1230	3.61	34.55	0.89	2.97	27.49	500	7.82	34.55	26.97	110	1.08
						600	6.72	34.52	27.10	97	1.19
						700	5.90	34.52	27.21	87	1.29
						800	5.33	34.52	27.28	80	1.38
						1000	4.49	34.54	27.39	70	1.55
HUGH M. SMITH; October 1, 1951; 0801 GCT; 8°57'N, 149°58'W; sounding, 2700 fm; wind, 060°, 16 kt; weather, slight drizzle; sea, moderate; wire angle, 10°.											42
0	28.00	34.42	-	0.18	21.97	0	28.00	34.42	21.97	585	0.00
10	28.05	34.43	4.56	0.20	21.97	10	28.05	34.43	21.97	586	0.06
25	27.96	34.43	4.55	0.17	22.00	20	28.01	34.43	21.98	585	0.12
49	22.61	34.50	4.86	0.23	23.69	30	26.95	34.67	22.51	534	0.17
99	12.32	34.30	2.17	1.85	26.01	50	22.61	34.50	23.69	422	0.27
199	10.58	34.67	0.21	2.43	26.61	75	15.55	34.32	25.34	264	0.36
295	9.62	34.64	0.40	2.58	26.75	100	12.31	34.30	26.01	201	0.41
393	8.70	34.59	0.34	2.75	26.86	150	11.20	34.65	26.49	156	0.50
487	8.03	34.56	0.43	2.84	26.94	200	10.56	34.67	26.62	143	0.58
587	6.96	34.50	0.44	2.96	27.05	250	10.05	34.66	26.70	135	0.65
785	5.54	34.51	0.57	3.05	27.24	300	9.59	34.64	26.76	130	0.72
979	4.66	34.51	1.03	3.02	27.35	400	8.65	34.59	26.86	119	0.85
1179	3.92	34.54	1.00	2.84	27.45	500	7.90	34.55	26.96	111	0.98
						600	6.84	34.50	27.07	100	1.09
						700	6.08	34.50	27.17	91	1.20
						800	5.47	34.51	27.25	83	1.29
						1000	4.60	34.51	27.36	73	1.47

HBL

HMS–II

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
43	HUGH M. SMITH; October 1, 1951; 1636 GCT; 10°00'N, 150°13'W; sounding, 2700 fm; wind, 050°, 18 kt; weather, partly cloudy; sea, moderate; wire angle, 20°.										
0	27.80	34.16	4.56	0.24	21.83	0	27.80	34.16	21.83	598	0.00
10	27.86	34.14	4.56	0.23	21.81	10	27.86	34.14	21.81	601	0.06
25	27.64	34.46	4.68	0.26	22.13	20	27.72	34.40	22.06	578	0.12
47	23.26	34.54	4.83	0.30	23.53	30	27.20	34.66	22.42	543	0.18
94	12.37	34.35	2.11	1.92	26.03	50	22.80	34.51	23.64	426	0.27
188	10.68	34.69	0.26	2.58	26.61	75	14.15	34.35	25.67	233	0.36
275	9.72	34.67	0.57	2.62	26.76	100	12.17	34.37	26.09	193	0.41
367	8.84	34.60	0.46	2.72	26.85	150	11.18	34.68	26.51	153	0.50
454	8.14	34.57	1.07	2.87	26.94	200	10.51	34.69	26.64	141	0.57
546	7.21	34.52	0.89	2.87	27.03	250	9.97	34.68	26.73	132	0.64
730	5.80	34.51	0.73	3.04	27.21	300	9.46	34.65	26.79	127	0.71
914	4.88	34.52	0.89	2.70	27.33	400	8.61	34.59	26.88	118	0.84
1110	4.14	34.59	0.78	2.34	27.47	500	7.68	34.54	26.98	109	0.96
						600	6.72	34.51	27.09	98	1.07
						700	5.98	34.51	27.19	89	1.18
						800	5.42	34.51	27.26	82	1.27
						1000	4.49	34.55	27.40	69	1.44
44	HUGH M. SMITH; October 2, 1951; 0120 GCT; 10°58'N, 150°02'W; sounding, 2800 fm; wind, 060°, 16 kt; weather, cloudy; sea, moderate; wire angle, 33°.										
0	28.00	34.03	4.49	0.06	21.68	0	28.00	34.03	21.68	613	0.00
8	28.03	34.03	4.42	0.07	21.68	10	28.00	34.03	21.69	613	0.06
20	27.98	34.03	4.49	0.06	21.69	20	27.98	34.03	21.69	612	0.12
43	26.76	34.68	4.70	0.12	22.58	30	27.94	34.12	21.77	605	0.18
85	16.70	34.36	3.57	0.81	25.11	50	25.30	34.65	23.01	487	0.29
163	11.42	34.71	0.13	3.35	26.49	75	19.22	34.41	24.53	341	0.40
240	10.40	34.68	0.19	2.44	26.65	100	14.36	34.35	25.63	237	0.47
319	9.60	34.65	0.18	2.55	26.76	150	11.72	34.63	26.37	166	0.57
397	8.90	34.61	0.22	2.65	26.85	200	10.87	34.70	26.59	146	0.65
474	7.96	34.54	0.23	2.79	26.94	250	10.28	34.67	26.66	138	0.72
627	6.54	- a)	- a)	- a)	-	300	9.81	34.66	26.74	132	0.79
787	5.36	34.47	0.59	2.44	27.23	400	8.87	34.61	26.85	121	0.93
977	4.53	34.51	1.08	2.80	27.36	500	7.69	34.52	26.96	110	1.05
						600	6.78	34.48	27.06	101	1.16
						700	6.00	34.47	27.16	92	1.24
						800	5.28	34.47	27.24	84	1.34
						1000	(4.50)	(34.51)	(27.37)	(72)	(1.52)
45	HUGH M. SMITH; October 2, 1951; 1010 GCT; 11°59'N, 150°03'W; sounding, 2800 fm; wind, 070°, 16 kt; weather, missing; sea, slight; wire angle, 30°.										
0	27.70	34.42	4.58	0.17	22.08	0	27.70	34.42	22.08	576	0.00
8	27.70	34.42	4.74	0.19	22.08	10	27.70	34.42	22.08	576	0.06
22	27.70	34.41	4.61	0.24	22.07	20	27.70	34.41	22.07	576	0.12
46	26.20	34.61	4.80	0.33	22.70	30	27.65	34.43	22.10	574	0.17
90	20.40	34.70	4.87	0.25	24.45	50	25.28	34.65	23.01	486	0.28
176	10.91	34.24	2.52	2.28	26.22	75	21.70	34.70	24.09	383	0.39
260	10.17	34.59	0.31	2.59	26.62	100	19.80	34.68	24.59	336	0.48
349	9.00	34.54	0.41	2.59	26.78	150	13.10	34.32	25.87	214	0.62
436	8.20	34.53	0.57	2.74	26.89	200	10.45	34.51	26.51	153	0.71
525	7.29	34.51	0.63	2.79	27.01	250	10.22	34.58	26.61	144	0.79
707	5.93	34.50	0.39	3.02	27.19	300	9.65	34.56	26.69	136	0.86
894	4.76	34.52	0.73	3.05	27.35	400	8.53	34.54	26.85	121	1.00
1078	4.01	34.51	0.55	2.84	27.42	500	7.53	34.51	26.98	109	1.12
						600	6.73	34.50	27.09	99	1.23
						700	5.99	34.50	27.18	89	1.34
						800	5.30	34.51	27.28	81	1.43
						1000	4.20	34.51	27.40	69	1.60

a) Unreasonable chemical values suggest Nansen bottle leakage.

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED			
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m	
HUGH M. SMITH; October 2, 1951; 1835 GCT; 13°00'N, 149°56'W; sounding, 2900 fm; wind, 060°, 16 kt; weather, partly cloudy; sea, slight; wire angle, 15°.												46
0	27.30	34.70	4.51	0.21	22.41	0	27.30	34.70	22.41	543	0.00	
10	27.31	34.71	4.46	0.31	22.42	10	27.31	34.71	22.42	543	0.05	
24	27.31	34.72	4.45	0.20	22.43	20	27.31	34.71	22.42	543	0.11	
53	26.29	34.76	4.61	0.18	22.78	30	27.30	34.73	22.44	541	0.16	
106	20.26	34.85	4.71	0.34	24.60	50	26.40	34.76	22.75	512	0.27	
209	10.90	34.44	1.00	2.34	26.38	75	23.00	34.87	23.86	406	0.38	
311	9.36	34.55	0.35	2.61	26.73	100	20.50	34.86	24.54	340	0.48	
418	8.26	34.51	0.50	2.67	26.87	150	15.88	34.64	25.52	248	0.63	
523	7.24	34.47	0.48	2.80	26.99	200	11.10	34.44	26.34	169	0.74	
629	6.37	34.47	-	2.93	27.11	250	10.21	34.51	26.55	149	0.82	
836	5.14	34.46	0.82	2.90	27.25	300	9.48	34.56	26.72	134	0.89	
1044	4.26	34.51	1.05	2.82	27.39	400	8.44	34.52	26.84	121	1.03	
1241	3.65	34.51	1.37	2.75	27.45	500	7.43	34.48	26.96	110	1.15	
						600	6.55	34.47	27.09	99	1.26	
						700	5.86	34.46	27.17	91	1.36	
						800	5.32	34.46	27.23	85	1.46	
						1000	4.42	34.50	27.37	72	1.64	
HUGH M. SMITH; October 3, 1951; 0302 GCT; 14°01'N, 150°03'W; sounding, 2900 fm; wind, 080°, 18 kt; weather, rain showers; sea, moderate; wire angle, 25°.												47
0	27.20	34.48	4.62	0.27	22.28	0	27.20	34.48	22.28	556	0.00	
9	27.24	34.51	4.63	0.27	22.29	10	27.24	34.51	22.29	555	0.06	
24	27.18	34.51	4.63	0.25	22.31	20	27.20	34.51	22.31	554	0.11	
51	26.59	34.93	4.71	0.26	22.82	30	27.10	34.53	22.36	549	0.17	
100	22.02	34.88	5.18	0.23	24.14	50	26.59	34.94	22.82	504	0.27	
198	11.31	34.13	4.04	1.16	26.06	75	24.78	34.93	23.38	452	0.39	
293	9.76	34.51	0.72	2.57	26.63	100	22.02	34.88	24.14	379	0.50	
394	8.65	34.53	0.50	2.66	26.82	150	17.90	34.60	25.01	296	0.67	
493	7.64	34.48	0.68	2.77	26.94	200	11.21	34.14	26.09	194	0.79	
593	6.66	34.45	0.76	2.90	27.05	250	10.22	34.39	26.46	158	0.88	
788	5.44	34.46	0.56	3.05	27.22	300	9.68	34.52	26.65	140	0.96	
987	4.52	34.51	1.67	2.15	27.36	400	8.60	34.53	26.83	123	1.10	
1184	3.76	34.50	1.59	2.22	27.43	500	7.57	34.48	26.95	112	1.22	
						600	6.60	34.45	27.05	101	1.34	
						700	5.89	34.45	27.15	92	1.44	
						800	5.38	34.47	27.23	85	1.54	
						1000	4.50	34.51	27.36	72	1.72	
HUGH M. SMITH; October 3, 1951; 1110 GCT; 15°02'N, 150°01'W; sounding, 3000 fm; wind, 080°, 19 kt; weather, partly cloudy; sea, moderate; wire angle, 16°.												48
0	26.70	- a)	4.65	0.06	-	0	26.70	34.80	22.70	518	0.00	
9	26.67	34.80	4.65	0.06	22.70	10	26.67	34.80	22.69	516	0.05	
24	26.64	34.81	4.65	0.04	22.71	20	26.65	34.81	22.71	515	0.10	
52	26.61	34.81	4.68	0.10	22.72	30	26.63	34.81	22.71	515	0.16	
105	21.86	34.89	5.66	0.05	24.19	50	26.61	34.81	22.72	515	0.26	
207	12.52	34.19	3.07	1.17	25.88	75	23.73	34.88	23.65	425	0.38	
309	9.12	34.32	1.14	2.27	26.59	100	22.37	34.89	24.05	387	0.48	
417	8.08	34.43	0.39	2.60	26.83	150	20.10	34.78	24.59	336	0.66	
518	7.00	34.40	0.60	2.69	26.97	200	15.12	34.35	25.46	252	0.81	
621	6.22	34.44	0.71	2.76	27.10	250	9.96	34.23	26.38	166	0.91	
821	5.23	34.44	0.69	2.89	27.23	300	9.23	34.31	26.56	148	0.99	
1023	4.40	34.45	1.00	2.88	27.33	400	8.25	34.42	26.80	126	1.14	
1220	3.72	34.47	1.53	1.96	27.41	500	7.17	34.40	26.95	112	1.26	
						600	6.34	34.43	27.08	99	1.38	
						700	5.80	34.44	27.16	92	1.48	
						800	5.35	34.44	27.21	87	1.58	
						1000	4.72	34.44	27.29	80	1.76	

a) Salinity sample bottle broken.

HBL

HMS-II

OBSERVED					COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
49	HUGH M. SMITH; October 4, 1951; 0215 GCT; 17°00'N, 150°42'W; sounding, 2900 fm; wind, 050°, 19 kt; weather, partly cloudy; sea, slight; wire angle, 28°.										
0	25.80	34.82	4.76	0.15	22.99	0	25.80	34.82	22.99	489	0.00
9	25.76	34.80	4.78	0.18	22.98	10	25.75	34.80	22.98	489	0.05
22	25.62	34.81	4.76	0.22	23.03	20	25.65	34.81	23.02	486	0.10
48	25.60	34.86	4.78	0.21	23.07	30	25.62	34.83	23.04	483	0.15
95	22.68	34.77	5.16	0.27	23.87	50	25.60	34.86	23.07	481	0.24
186	17.48	34.53	4.24	0.59	25.06	75	25.43	34.87	23.13	475	0.36
275	11.18	34.41	1.41	2.25	26.30	100	22.48	34.76	23.92	399	0.47
368	9.68	34.49u	0.31	2.63	26.63	150	20.57	34.68	24.38	355	0.66
459	8.04	34.36u	0.57	2.66	26.79	200	15.98	34.47	25.36	262	0.82
553	7.18	34.41	0.66	2.75	26.95	250	11.75	34.41	26.20	183	0.94
738	5.76	34.40	0.67	2.86	27.13	300	10.77	34.43	26.39	164	1.02
932	4.76	34.44	0.86	2.88	27.28	400	9.09	34.45	26.69	136	1.18
1124	4.06	34.45	1.10	2.67	27.36	500	7.61	34.39	26.87	119	1.32
						600	6.80	34.41	27.00	106	1.44
						700	6.05	34.40	27.10	98	1.55
						800	5.37	34.41	27.19	89	1.65
						1000	4.50	34.44	27.31	78	1.84
50	HUGH M. SMITH; October 4, 1951; 1717 GCT; 19°00'N, 151°19'W; sounding, 2900 fm; wind, 070°, 17 kt; weather, partly cloudy; sea, slight; wire angle, 23°.										
0	25.50	34.91	4.75	0.18	23.14	0	25.50	34.91	23.14	474	0.00
9	25.50	34.90	4.77	0.21	23.13	10	25.50	34.90	23.13	475	0.05
23	25.52	34.91	4.77	0.25	23.14	20	25.51	34.91	23.14	474	0.10
51	25.51	34.93	4.77	0.17	23.15	30	25.51	34.92	23.14	474	0.14
101	22.15	35.07	5.07	0.15	24.25	50	25.51	34.93	23.15	473	0.24
197	17.49	34.69	4.33	0.45	25.18	75	23.61	35.04	23.81	410	0.35
292	10.50	34.13	3.22	1.56	26.21	100	22.16	35.07	24.25	368	0.45
393	8.30	34.23	1.34	2.45	26.64	150	19.58	34.89	24.80	315	0.62
493	7.16	34.29	0.71	2.76	26.86	200	17.27	34.67	25.22	276	0.77
594	6.64	34.37	0.62	2.88	26.99	250	12.55	34.19	25.88	214	0.90
794	5.39	34.39	0.86	3.02	27.17	300	10.28	34.14	26.25	178	1.00
999	4.50	34.51	1.85	1.84	27.36	400	8.21	34.26	26.68	137	1.16
1198	3.86	34.51	2.98	1.19	27.43	500	7.11	34.30	26.88	109	1.30
						600	6.60	34.38	27.01	106	1.42
						700	6.00	34.38	27.09	99	1.53
						800	5.35	34.39	27.17	90	1.63
						1000	4.50	34.52	27.37	72	1.82

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; October 24, 1951; 1320 GCT; 20°18'N, 159°18'W; sounding, 2500 fm; wind, 120°, 9 kt; weather, partly cloudy; sea, moderate; wire angle, 18°.										1
0	26.20	34.96	0.32	22.98	0	26.15	34.96	22.97	490	0.00
10	26.17	34.97	0.41	22.98	10	26.17	34.97	22.97	490	0.05
29	26.20	34.96	0.18	22.96	20	26.19	34.97	22.97	490	0.10
59	24.84	34.90	0.31	23.33	30	26.20	34.96	22.96	491	0.15
115	21.34	35.01	0.42	24.43	50	26.18	34.92	22.93	493	0.25
230	13.49	34.34	1.28	25.80	75	23.38	34.98	23.82	408	0.36
341	9.20	34.16	1.99	26.45	100	21.95	35.00	24.25	368	0.46
446	7.18	34.22	2.73	26.80	150	19.88	34.95	24.77	318	0.63
555	6.06	34.29	3.07	27.01	200	16.25	34.62	25.41	257	0.78
662	5.38	34.38	3.20	27.16	250	12.60	34.28	25.93	208	0.90
881	4.54	34.43	3.22	27.30	300	10.60	34.18	26.22	180	1.00
1093	3.82	34.43	2.91	27.37	400	7.92	34.18	26.66	139	1.16
1305	3.29	34.38	2.60	27.38	500	6.52	34.26	26.92	114	1.30
					600	5.71	34.32	27.07	100	1.41
					700	5.18	34.40	27.20	88	1.51
					800	4.78	34.43	27.27	81	1.60
					1000	4.15	34.44	27.34	74	1.78
HUGH M. SMITH; October 24, 1951; 2115 GCT; 21°01'N, 159°14'W; sounding, 2500 fm; wind, 120°, 9 kt; weather, cloudy; sea, slight; wire angle, 24°.										2
0	26.50	34.88	0.32	22.81	0	26.48	34.88	22.81	505	0.00
10	26.44	34.89	0.37	22.83	10	26.44	34.89	22.83	503	0.05
28	26.43	34.88	0.32	22.83	20	26.43	34.89	22.83	503	0.10
55	26.42	34.88	0.27	22.83	30	26.43	34.88	22.82	504	0.15
109	22.22	34.98	0.35	24.16	50	26.43	34.88	22.82	504	0.25
214	16.68	34.67	0.82	25.35	75	25.25	34.90	23.21	467	0.37
317	10.25	34.14	1.76	26.26	100	22.72	34.98	24.01	390	0.48
414	7.78	34.13	2.43	26.64	150	20.61	34.97	24.59	336	0.67
518	6.62	34.31	2.96	26.95	200	17.62	34.75	25.19	278	0.82
617	5.71	34.30	3.10a)	27.06	250	13.10	34.32	25.86	214	0.95
825	4.82	34.42	3.17	27.27	300	10.87	34.17	26.17	185	1.05
1032	4.04	34.50	3.05a)	27.41	400	8.01	34.11	26.59	145	1.22
1239	3.48	-	-	-	500	6.77	34.31	26.92	113	1.36
					600	5.83	34.30	27.04	103	1.48
					700	5.31	34.35	27.14	93	1.58
					800	4.92	34.41	27.23	84	1.68
					1000	4.15	34.49	27.38	70	1.85
HUGH M. SMITH; October 25, 1951; 0443 GCT; 21°46'N, 159°12'W; sounding, 1850 fm; wind, 320°, 8 kt; weather, cloudy; sea, moderate; wire angle, 05°.										3
0	26.80	34.88	0.27	22.70	0	26.83	34.88	22.70	516	0.00
10	26.64	34.87	0.28	22.75	10	26.64	34.87	22.75	511	0.05
31	26.60	34.87	0.29b)	22.77	20	26.62	34.87	22.76	510	0.10
60	26.58	34.87	0.30	22.77	30	26.60	34.87	22.76	510	0.15
118	21.85	35.12	0.33	24.37	50	26.59	34.87	22.77	509	0.26
234	15.42	34.52	0.96b)	25.53	75	25.85	34.89	23.01	486	0.38
346	9.21	34.13	1.96	26.42	100	23.25	35.07	23.93	398	0.49
455	7.06	34.10	2.54	26.72	150	20.28	35.02	24.72	323	0.68
568	5.92	34.21	2.98	26.96	200	18.10	34.82	25.12	284	0.83
677	4.94	34.29	3.22	27.14	250	14.20	34.42	25.71	229	0.96
900	4.50	34.46	3.18	27.32	300	10.95	34.20	26.18	184	1.07
1114	3.84	34.50	3.20	27.43	400	7.97	34.10	26.59	145	1.24
1324	3.31	34.50	3.02	27.48	500	6.58	34.14	26.81	124	1.38
					600	5.59	34.22	27.00	106	1.50
					700	4.87	34.32	27.17	90	1.61
					800	4.68	34.42	27.27	81	1.70
					1000	4.19	34.49	27.38	70	1.87

a) Alternate values: 617 meters, 3.21; 1032, 3.16 µg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.

b) Alternate values: 31 meters, 0.23; 234, 0.91 µg at/L. Average values used.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
4	HUGH M. SMITH; October 25, 1951; 1133 GCT; 22°28'N, 159°14'W; sounding, 1830 fm; wind, 060°, 6 kt; weather, partly cloudy; sea, slight; wire angle, 12°.									
0	26.20	34.93	0.33a)	22.92	0	26.25	34.93	22.92	495	0.00
10	26.26	34.91	0.31a)	22.91	10	26.26	34.91	22.90	496	0.05
29	26.29	34.92	0.38a)	22.90	20	26.28	34.91	22.89	497	0.10
58	26.08	34.93	0.25	22.97	30	26.29	34.92	22.90	496	0.15
118	21.45	35.04	0.40	24.42	50	26.28	34.93	22.91	496	0.25
231	14.90	34.42	1.07	25.57	75	24.45	34.95	23.49	441	0.37
344	9.44	34.12	1.51	26.38	100	22.17	35.03	24.21	372	0.47
453	7.02	34.04	2.25	26.68	150	19.75	34.94	24.80	316	0.64
565	5.59	34.11	2.97	26.92	200	16.25	34.55	25.36	262	0.79
673	5.58	34.34	3.16	27.10	250	14.02	34.35	25.69	230	0.92
896	4.44	34.43	3.18	27.31	300	11.46	34.21	26.09	192	1.02
1110	3.82	34.51	3.07	27.44	400	7.96	34.06	26.56	148	1.20
1318	3.28	34.47	2.11	27.46	500	6.35	34.05	26.77	128	1.35
					600	5.58	34.20	26.99	107	1.47
					700	5.48	34.35	27.12	95	1.58
					800	4.91	34.39	27.22	86	1.68
					1000	4.12	34.49	27.39	70	1.85
5	HUGH M. SMITH; October 25, 1951; 1740 GCT; 23°02'N, 159°15'W; sounding, 2600 fm; wind, 170°, 8 kt; weather, partly cloudy; sea, slight; wire angle, 12°.									
0	26.20	34.97	0.25	22.96	0	26.22	34.97	22.96	491	0.00
10	26.22	34.97	0.26	22.96	10	26.22	34.97	22.96	491	0.05
25	26.22	34.95	0.25	22.95	20	26.22	34.96	22.95	492	0.10
54	26.23	34.92	0.80	22.92	30	26.22	34.94	22.94	493	0.15
105	22.07	35.14	0.94	24.33	50	26.23	34.92	22.92	495	0.25
207	17.23	34.79	1.08	25.32	75	23.90	35.08	23.75	416	0.36
307	12.12	34.28	1.13	26.03	100	22.25	35.14	24.27	366	0.46
412	8.14b)	34.04	1.88	26.52	150	19.72	35.04	24.88	308	0.63
412	8.21b)	34.04	-	26.51	200	17.62	34.84	25.26	272	0.78
514	7.02	34.22	2.96	26.82	250	14.42	34.48	25.71	229	0.91
615	5.98	34.28	3.17	27.01	300	12.35	34.30	25.99	202	1.02
812	5.04	34.41	3.30	27.23	400	8.42	34.05	26.48	156	1.20
1013	4.20	34.46	3.18	27.36	500	7.17	34.21	26.79	126	1.35
1207	3.63	34.47	2.11	27.42	600	6.12	34.26	26.97	109	1.48
					700	5.47	34.38	27.15	92	1.59
					800	5.09	34.41	27.21	86	1.68
					1000	4.22	34.46	27.35	73	1.86
6	HUGH M. SMITH; October 26, 1951; 0115 GCT; 22°46'N, 158°25'W; sounding, 2600 fm; wind, 160°, 11 kt; weather, partly cloudy; sea, slight; wire angle, 18°.									
0	26.30	34.79	0.19	22.79	0	26.34	34.79	22.79	508	0.00
10	26.21	34.85	0.19c)	22.87	10	26.31	34.85	22.84	502	0.05
29	26.24	34.85	0.27c)	22.87	20	26.27	34.85	22.85	501	0.10
57	25.92	34.85	0.23	22.97	30	26.23	34.85	22.86	500	0.15
114	22.94	35.06	0.25	24.02	50	25.95	34.85	22.95	492	0.25
224	16.20	34.55	0.74	25.37	75	25.88	34.85	22.97	490	0.37
333	10.18	34.16	1.55	26.28	100	23.98	34.99	23.66	424	0.49
437	7.55	34.99	1.95	26.57	150	20.80	35.04	24.59	335	0.68
545	5.76	34.04	2.72	26.84	200	18.07	34.74	25.07	290	0.84
649	4.92	34.17	3.06	27.05	250	14.65	34.45	25.64	236	0.98
865	4.20	34.39	3.09	27.30	300	11.55	34.25	26.11	191	1.08
1074	3.76	34.48	2.98	27.42	400	8.38	34.04	26.48	156	1.26
1282	3.22	34.49	1.53	27.48	500	6.38	33.99	26.72	132	1.42
					600	5.25	34.10	26.95	111	1.54
					700	4.64	34.25	27.14	93	1.65
					800	4.31	34.36	27.26	82	1.75
					1000	3.90	34.47	27.39	69	1.92

a) Alternate values: 0 meters, 0.26; 10, 0.24; 29, 0.28 µg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.

b) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

c) Alternate values: 10 meters, 0.29; 29, 0.20 µg at/L. Average values used.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; October 26, 1951; 0805 GCT; 22°09'N, 158°24'W; sounding, 2700 fm; wind, 060°, 19 kt; weather, cloudy; sea, rough; wire angle, 10°. 7

0	26.50	34.86	0.27	22.81	0	26.46	34.86	22.80	506	0.00
10	26.46	34.84	0.30	22.79	10	26.46	34.84	22.79	508	0.05
29	26.24	34.91	0.24	22.91	20	26.41	34.89	22.84	502	0.10
60	26.14	34.89	0.36	22.93	30	26.23	34.91	22.91	496	0.15
118	22.62	35.03	0.51	24.09	50	26.16	34.89	22.92	495	0.25
232	15.59	34.52	0.94	25.49	75	25.10	34.88	23.24	464	0.37
346	9.36	34.10	1.87	26.37	100	23.40	34.99	23.83	408	0.48
454	7.35	34.10	2.58	26.68	150	20.73	35.02	24.60	335	0.67
568	6.03	34.23	3.02	26.96	200	18.00	34.76	25.10	286	0.83
678	5.30	34.36	3.27	27.15	250	14.11	34.39	25.71	229	0.96
902	4.44	34.44	3.28	27.32	300	11.10	34.19	26.14	188	1.07
1117	3.84	34.50	3.15	27.43	400	8.23	34.07	26.53	151	1.24
1325	3.30	34.49	2.58	27.47	500	6.73	34.15	26.80	125	1.39
					600	5.78	34.27	27.02	104	1.51
					700	5.20	34.38	27.18	90	1.62
					800	4.77	34.41	27.25	82	1.71
					1000	4.15	34.48	27.37	71	1.88

HUGH M. SMITH; October 26, 1951; 1439 GCT; 21°30'N, 158°26'W; sounding, 1350 fm; wind, 110°, 10 kt; weather, cloudy; sea, moderate; wire angle, 00°. 8

0	26.50	34.88	0.29a)	22.80	0	26.52	34.88	22.80	506	0.00
10	26.50	34.96	0.31a)	22.87	10	26.50	34.96	22.86	500	0.05
26	26.38	34.86	0.36a)	22.83	20	26.43	34.88	22.82	504	0.10
55	26.16	34.88	0.45a)	22.91	30	26.35	34.86	22.83	503	0.15
110	24.34	34.86	0.40	23.45	50	26.19	34.88	22.90	496	0.25
218	17.56	34.79	0.78	25.24	75	26.00	34.88	22.96	491	0.38
326	10.53	34.20	1.84a)	26.26	100	25.10	34.84	23.21	467	0.50
438	7.58	34.14	2.73	26.68	150	21.95	35.03	24.27	366	0.71
546	6.23	34.21	3.01a)	26.92	200	18.50	34.88	25.07	290	0.87
653	5.42	34.29	3.26	27.09	250	15.88	34.62	25.50	249	1.01
862	4.67	34.44	3.33a)	27.29	300	12.00	34.29	26.05	196	1.13
1073	4.10	34.48	3.23	27.39	400	8.27	34.13	26.57	148	1.30
1269	3.53	34.50	2.75	27.45	500	6.73	34.20	26.84	121	1.45
					600	5.77	34.23	26.99	107	1.57
					700	5.19	34.36	27.16	91	1.68
					800	4.82	34.42	27.25	82	1.77
					1000	4.29	34.47	27.35	73	1.94

HUGH M. SMITH; October 26, 1951; 2123 GCT; 20°46'N, 158°28'W; sounding, 2400 fm; wind, 140°, 11 kt; weather, cloudy; sea, slight; wire angle, 30°. 9

0	26.70	34.88	0.28	22.75	0	26.68	34.88	22.75	511	0.00
9	26.61	34.88	0.30	22.77	10	26.61	34.88	22.77	509	0.05
27	26.57	34.87	0.33	22.78	20	26.59	34.88	22.77	509	0.10
52	26.40	34.87	0.26	22.83	30	26.56	34.87	22.78	508	0.15
100	23.60	34.92	0.39	23.72	50	26.41	34.87	22.82	504	0.25
192	18.80	34.91	0.64	25.02	75	26.00	34.86	22.94	492	0.38
281	11.52	34.20	1.52b)	26.08	100	23.60	34.92	23.71	419	0.49
368	8.79c)	34.14	2.25	26.50	150	21.15	35.03	24.49	345	0.69
368	8.85c)	34.14	-	26.49	200	18.19	34.85	25.12	284	0.85
458	7.36	34.20	2.83	26.76	250	14.73	34.47	25.64	236	0.98
545	6.02	34.23	3.15	26.96	300	10.65	34.17	26.21	182	1.09
722	4.96	34.42	3.39	27.24	400	8.24	34.14	26.58	146	1.26
904	4.38	34.47	3.27	27.35	500	6.69	34.22	26.86	119	1.40
1097	3.84	34.47	3.40b)	27.40	600	5.56	34.29	27.06	100	1.52
					700	5.06	34.40	27.21	86	1.62
					800	4.69	34.45	27.29	79	1.71
					1000	4.09	34.47	27.37	71	1.88

a) Alternate values: 0 meters, 0.42; 10, 0.40; 26, 0.41; 55, 0.35; 326, 1.94; 546, 3.14; 862, 3.36 μg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.

b) Alternate values: 281 meters, 1.52; 1097, 3.34 μg at/L. Average values used.

c) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

HBL

HMS-12

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

10 HUGH M. SMITH; October 27, 1951; 0254 GCT; 20°18'N, 158°22'W; sounding, 2520 fm; wind, 180°, 11 kt; weather, cloudy; sea, slight; wire angle 31°.

0	26.80	34.86	0.34	22.69	0	26.83	34.86	22.68	517	0.00
9	26.75	34.86	0.31a)	22.71	10	26.74	34.86	22.71	514	0.05
25	26.70	34.86	0.40a)	22.73	20	26.71	34.86	22.72	514	0.10
49	26.38	34.82	0.36	22.80	30	26.68	34.86	22.73	513	0.15
98	23.45	34.87	0.33a)	23.73	50	26.35	34.82	22.80	506	0.26
192	18.65	34.91	0.65	25.06	75	24.99	34.83	23.23	465	0.38
281	12.01	34.25	1.44a)	26.02	100	23.38	34.88	23.75	416	0.49
368	8.91b)	34.13	2.10	26.47	150	21.08	35.03	24.51	343	0.68
368	8.98b)	34.13	-	26.46	200	18.00	34.84	25.16	281	0.84
458	7.45	34.18	2.77	26.73	250	14.10	34.42	25.73	227	0.97
546	6.24	34.25	3.16	26.95	300	11.00	34.19	26.16	186	1.08
729	5.01	34.42	3.29	27.24	400	8.39	34.14	26.56	148	1.25
915	4.34	34.46	3.19	27.34	500	6.82	34.21	26.84	122	1.39
1105	3.74	34.43	3.24	27.38	600	5.83	34.32	27.05	101	1.51
					700	5.19	34.40	27.19	88	1.61
					800	4.67	34.46	27.30	78	1.70
					1000	4.12	34.46	27.36	72	1.87

11 HUGH M. SMITH; October 27, 1951; 1724 GCT; 18°47'N, 157°27'W; sounding, 2450 fm; wind, 160°, 19 kt; weather, cloudy; sea, rough; wire angle, 00°.

0	26.50	34.79	0.18	22.74	0	26.50	34.79	22.73	512	0.00
10	26.49	34.78	0.27	22.74	10	26.49	34.78	22.73	513	0.05
30	26.26	34.83	0.21	22.84	20	26.39	34.80	22.78	508	0.10
59	26.06	34.79	0.34	22.88	30	26.26	34.83	22.84	502	0.15
119	22.74	35.00	0.30	24.03	50	26.11	34.80	22.86	500	0.25
237	14.22	34.36	1.04	25.66	75	25.52	34.81	23.06	482	0.38
353	8.89	34.19	2.22	26.52	100	23.68	34.91	23.68	422	0.49
466	7.75	34.30	2.71	26.78	150	21.80	35.11	24.37	356	0.69
583	6.68	34.35	2.98	26.97	200	18.50	34.90	25.09	288	0.85
695	5.78	34.37	3.14	27.10	250	13.32	34.31	25.81	219	0.98
924	4.61	34.42	3.12	27.28	300	10.05	34.18	26.32	171	1.08
1142	3.92	34.50	3.04	27.42	400	8.40	34.23	26.62	142	1.24
1352	3.28	34.52	3.02	27.50	500	7.41	34.33	26.85	121	1.38
					600	6.52	34.35	26.99	107	1.51
					700	5.74	34.37	27.10	96	1.62
					800	5.19	34.39	27.19	88	1.72
					1000	4.36	34.45	27.33	75	1.90

a) Alternate values: 9 meters, 0.38; 25, 0.33; 98, 0.41; 281, 1.49 μg at/L. Values do not agree within 0.02 tolerance. Average value used in constructing phosphate-temperature curve.

b) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; October 28, 1951; 0037 GCT; 19°28'N, 157°27'W; sounding, 2300 fm; wind, 180°, 18 kt; weather, overcast; sea, rough; wire angle, 07°. 12

0	26.10	34.86	0.28	22.92	0	26.10	34.86	22.91	495	0.00
10	26.10	34.87	0.30a)	22.93	10	26.10	34.87	22.92	494	0.05
31	26.08	34.86	0.31a)	22.92	20	26.10	34.87	22.92	494	0.10
61	24.54	34.89	0.27a)	23.41	30	26.08	34.86	22.92	495	0.15
119	21.78	35.12	0.34a)	24.39	50	25.60	34.88	23.08	479	0.25
234	13.58	34.33	1.22	25.78	75	23.89	34.90	23.61	428	0.36
346	8.81	34.17	2.25a)	26.52	100	22.78	35.00	24.01	390	0.46
453	6.87	34.22	2.93a)	26.84	150	19.55	35.03	24.92	304	0.64
564	6.12	34.34	3.13a)	27.04	200	15.46	34.52	25.51	247	0.78
673	5.59	34.35	3.26a)	27.11	250	12.78	34.26	25.88	213	0.90
894	4.66	34.49	3.24	27.33	300	10.40	34.16	26.24	178	1.00
1107	3.96	34.43	3.22a)	27.36	400	7.53	34.19	26.72	133	1.16
1314	3.36	34.59	1.79	27.54	500	6.46	34.32	26.97	109	1.29
					600	5.88	34.35	27.07	100	1.40
					700	5.47	34.37	27.14	93	1.50
					800	5.01	34.46	27.26	81	1.60
					1000	4.34	34.46	27.34	74	1.77

HUGH M. SMITH; October 28, 1951; 0747 GCT; 20°06'N, 157°28'W; sounding, 2260 fm; wind, 150°, 19 kt; weather, missing; sea, rough; wire angle, 09°. 13

0	26.10	34.85	0.18	22.90	0	26.12	34.85	22.90	496	0.00
9	26.12	34.85	0.21	22.90	10	26.12	34.85	22.90	496	0.05
28	26.13	34.84	0.23	22.89	20	26.13	34.84	22.89	498	0.10
55	26.02	34.85	0.24	22.93	30	26.13	34.84	22.89	498	0.15
111	22.82	34.93	0.36	23.96	50	26.07	34.85	22.91	495	0.25
214	17.18	34.75	0.48	25.30	75	25.37	34.86	23.14	474	0.37
314	10.58	34.17	1.77	26.22	100	23.25	34.91	23.81	410	0.48
412	7.98	34.19	2.55b)	26.66	150	21.50	35.08	24.43	350	0.67
513	6.60	34.24	2.95	26.90	200	18.20	34.88	25.14	282	0.84
611	6.18	34.36	3.07b)	27.05	250	14.10	34.37	25.69	230	0.97
812	4.92	34.46	3.17	27.28	300	11.11	34.19	26.14	188	1.08
1010	4.30	34.48	3.13	27.36	400	8.22	34.18	26.61	143	1.25
1207	3.64	34.50	3.16	27.45	500	6.70	34.23	26.87	119	1.38
					600	6.27	34.34	27.01	105	1.50
					700	5.62	34.38	27.13	94	1.61
					800	4.99	34.45	27.26	82	1.71
					1000	4.31	34.49	27.36	72	1.88

HUGH M. SMITH; October 28, 1951; 1451 GCT; 20°40'N, 157°28'W; sounding, 2150 fm; wind, 140°, 16 kt; weather, missing; sea, moderate; wire angle, 00°. 14

0	26.20	34.86	0.24	22.88	0	26.22	34.86	22.88	499	0.00
10	26.18	34.86	0.26	22.89	10	26.18	34.86	22.89	498	0.05
30	26.21	34.86	0.29	22.88	20	26.19	34.86	22.88	498	0.10
60	25.63	34.87	0.31c)	23.07	30	26.21	34.86	22.88	499	0.15
120	20.56	34.99	0.40c)	24.62	50	25.88	34.86	22.98	489	0.25
239	14.60	34.43	1.05	25.64	75	25.20	34.86	23.19	469	0.37
355	9.85	34.14	1.95c)	26.32	100	23.30	34.90	23.79	412	0.48
469	7.20	34.19	2.73	26.78	150	18.98	34.90	24.96	300	0.66
585	5.92	34.26	3.03	27.00	200	16.70	34.68	25.35	263	0.80
697	5.46	34.35	3.15	27.13	250	13.98	34.39	25.73	227	0.93
926	4.46	34.43	3.15	27.31	300	11.68	34.22	26.06	196	1.04
1147	3.84	34.46	3.10	27.39	400	8.63	34.13	26.51	153	1.22
1357	3.29	34.50	3.09	27.48	500	6.73	34.20	26.84	121	1.36
					600	5.85	34.27	27.01	105	1.48
					700	5.45	34.35	27.12	94	1.59
					800	4.98	34.40	27.22	85	1.69
					1000	4.19	34.45	27.35	73	1.87

a) Alternate values: 10 meters, 0.35; 31, 0.36; 61, 0.38; 119, 0.39; 346, 2.34; 453, 2.88; 564, 3.19; 673, 3.21; 1107, 3.14 µg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.

b) Alternate values: 412 meters, 2.53; 611, 3.12 µg at/L. Average values used.

c) Alternate values: 60 meters, 0.36; 120, 0.46; 355, 1.86 µg at/L. Average values used.

HBL

HMS-12

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

15 HUGH M. SMITH; October 28, 1951; 1925 GCT; 21°05'N, 157°28'W; sounding, 30 fm; wind, 140°, 16 kt; weather, partly cloudy; sea, moderate; wire angle, 00°.

0	26.20	34.89	0.37	22.91	0	26.20	34.89	496	
10	26.18	34.87	0.36	22.90	10	26.18	34.87	497	
26	26.12	34.88	0.35	22.93	20	26.13	34.88	495	
35	26.08	34.88	0.37	22.94	30	26.09	34.88	494	

16 HUGH M. SMITH; October 28, 1951; 2231 GCT; 21°17'N, 157°25'W; sounding, 300 fm; wind, 140°, 16 kt; weather, partly cloudy; sea, moderate; wire angle, 09°.

0	26.10	34.79	0.30	22.87	0	26.07	34.79	499	
10	26.04	34.84	0.30	22.92	10	26.04	34.84	495	
25	25.92	34.82	0.32	22.95	20	25.97	34.82	494	
49	25.78	34.85	0.35	23.01	30	25.88	34.82	492	
98	23.18	35.01	0.41a)	23.91	50	25.77	34.85	486	
196	18.47	34.88	0.60	25.08	75	24.08	34.93	432	
292	10.98	34.16	1.49	26.15	100	22.96	35.04	392	
389	8.23b)	34.12	2.16	26.57	150	20.60	35.14	323	
389	8.29b)	34.12	-	26.56	200	18.28	34.87	285	
487	6.71	34.21	2.63	26.86	250	14.05	34.39	228	
					300	10.65	34.14	184	
					400	8.12	34.12	146	
					500	(6.58)	(34.21)	(118)	

17 HUGH M. SMITH; October 29, 1951; 0535 GCT; 21°48'N, 157°29'W; sounding, 1900 fm; wind, 140°, 16 kt; weather, overcast; sea, moderate; wire angle, 23°.

0	25.80	34.81	0.36	22.96	0	25.83	34.81	22.96	491	0.00
9	25.84	34.79	0.34	22.94	10	25.84	34.79	22.94	493	0.05
27	25.67	34.79	0.39	23.00	20	25.73	34.79	22.98	490	0.10
54	25.66	34.85	0.48	23.05	30	25.65	34.79	23.00	487	0.15
105	22.89	34.98	0.41	23.97	50	25.67	34.84	23.03	484	0.24
203	19.71	35.18	0.49	24.99	75	25.25	34.87	23.18	470	0.36
295	11.68	34.20	1.30	26.05	100	23.07	34.96	23.90	401	0.47
383	9.02b)	34.09	2.05	26.42	150	21.55	35.23	24.53	341	0.66
383	9.08b)	34.09	2.01	26.41	200	19.82	35.19	24.97	300	0.82
476	7.10	34.10	2.72	26.72	250	16.00	34.62	25.47	252	0.97
565	6.04	34.18	3.02	26.92	300	11.40	34.18	26.08	194	1.08
755	4.95	34.34	3.23	27.18	400	8.67	34.08	26.47	157	1.26
946	4.29	34.46	3.08	27.35	500	6.71	34.13	26.79	126	1.41
1145	3.76	34.42	3.11c)	27.37	600	5.79	34.21	26.97	109	1.54
					700	5.21	34.30	27.11	96	1.65
					800	4.73	34.40	27.25	83	1.74
					1000	4.19	34.46	27.35	73	1.92

a) Alternate value, 0.41 μg at/L. Values do not agree within 0.02 tolerance. Average value used in constructing phosphate-temperature curve.

b) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

c) Alternate value, 3.07 μg at/L. Average value used.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; October 29, 1951; 0900 GCT; 22°12'N, 157°31'W; sounding, 2560 fm; wind, 130°, 12 kt; weather, partly cloudy; sea, rough; wire angle, 24°. 18

0	25.70	34.67	0.35a)	22.89	0	25.73	34.67	22.88	498	0.00
9	25.72	34.68	0.32	22.90	10	25.72	34.68	22.90	497	0.05
27	25.56	34.75	0.30a)	23.00	20	25.62	34.73	22.96	490	0.10
54	25.56	34.74	0.33	22.99	30	25.55	34.75	23.00	487	0.15
107	22.46	34.95	0.38a)	24.07	50	25.55	34.74	22.99	488	0.25
209	18.86	35.01	0.44	25.08	75	25.15	34.78	23.15	473	0.37
307	12.20	34.16	1.29a)	25.92	100	22.96	34.90	23.88	402	0.48
402	8.74	34.10	2.06a)	26.47	150	21.12	35.20	24.63	332	0.66
501	6.49	34.05	2.62	26.76	200	19.20	35.06	25.03	294	0.82
597	5.71	34.13	3.03	26.92	250	15.50	34.52	25.51	248	0.96
800	4.67	34.34	3.19	27.21	300	12.50	34.19	25.88	213	1.08
1013	3.97	34.48	3.03	27.40	400	8.85	34.10	26.45	158	1.27
1229	3.40	34.39	2.92	27.38	500	6.49	34.05	26.76	129	1.42
					600	5.68	34.14	26.93	113	1.55
					700	5.14	34.24	27.07	99	1.66
					800	4.67	34.35	27.21	86	1.77
					1000	3.98	34.48	27.39	69	1.94

HUGH M. SMITH; October 29, 1951; 1655 GCT; 21°50'N, 156°47'W; sounding, 2680 fm; wind, 190°, 13 kt; weather, overcast; sea, rough; wire angle, 08°. 19

0	25.70	34.78	0.33	22.97	0	25.73	34.78	22.97	490	0.00
10	25.73	34.81	0.34	22.99	10	25.73	34.81	22.99	488	0.05
30	25.75	34.82	0.31	22.99	20	25.74	34.82	22.99	488	0.10
60	25.75	34.81	0.47	22.99	30	25.75	34.82	22.99	488	0.15
119	22.53	35.02	0.41	24.10	50	25.75	34.81	22.98	489	0.24
235	18.00	34.88	0.56	25.20	75	25.73	34.83	23.01	486	0.37
348	9.96	34.07	1.70	26.25	100	23.65	34.92	23.70	420	0.48
458	7.88	34.17	2.61	26.66	150	21.46	35.19	24.53	341	0.67
571	6.33	34.23	3.08	26.92	200	19.40	35.11	25.02	295	0.84
681	5.24	34.29	3.23	27.10	250	16.95	34.73	25.33	265	0.98
906	4.61	34.42	3.22	27.28	300	11.70	34.14	25.99	202	1.10
1124	4.00	34.45	3.19	27.38	400	8.86	34.11	26.46	158	1.29
1338	3.34	34.51	3.07b)	27.48	500	7.23	34.20	26.77	128	1.44
					600	5.96	34.24	26.97	109	1.56
					700	5.16	34.30	27.12	95	1.67
					800	4.87	34.38	27.22	86	1.77
					1000	4.41	34.45	27.32	76	1.95

HUGH M. SMITH; October 29, 1951; 2334 GCT; 21°10'N, 156°35'W; sounding, 256 fm; wind, 150°, 8 kt; weather, overcast; sea, slight; wire angle, 02°. 20

0	25.70	34.84	0.27	23.03	0	25.72	34.84	486
10	25.70	34.84	0.28	23.03	10	25.70	34.84	485
25	25.72	34.84	0.36	23.02	20	25.71	34.84	485
50	25.72	34.87	0.36	23.04	30	25.72	34.84	486
101	22.44	35.00	0.39	24.11	50	25.72	34.87	483
201	17.31	34.76	0.54	25.27	75	25.65	34.88	481
300	11.20	34.14	1.34	26.09	100	22.44	35.00	381
					150	20.37	35.18	314
					200	17.32	34.78	269
					250	12.63	34.24	211
					300	11.20	34.14	193

HUGH M. SMITH; October 30, 1951; 0337 GCT; 20°49'N, 156°45'W; sounding, 35 fm; wind, direction missing, 14 kt; weather, overcast; sea, slight; wire angle, 00°. 21

0	25.80	34.58	0.40	22.79	0	25.82	34.58	507
10	25.84	34.81	0.39	22.96	10	25.84	34.81	491
25	25.48	34.82	0.49	23.08	20	25.66	34.82	485
					30	(25.35)	(34.82)	(476)

a) Alternate values: 0 meters, 0.40; 27, 0.39; 107, 0.47; 307, 1.34; 402, 2.10 µg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.

b) Alternate value, 3.12 µg at/L. Average value used.

HBL

HMS-12

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	μg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
22	HUGH M. SMITH; October 30, 1951; 0808 GCT; 20°22'N, 156°39'W; sounding, 1220 fm; wind, 070°, 22 kt; weather, overcast; sea, slight; wire angle, 26°.									
0	26.50	34.75	0.33	22.71	0	26.49	34.75	22.71	515	0.00
9	26.48	34.75	0.34	22.72	10	26.48	34.75	22.71	514	0.05
27	26.50	34.83	0.35	22.77	20	26.50	34.80	22.74	512	0.10
55	25.86	34.82	0.32	22.96	30	26.49	34.83	22.77	509	0.15
108	22.95	35.06	0.34	24.02	50	26.26	34.84	22.85	501	0.26
211	18.76	34.89	0.50	25.02	75	25.45	34.85	23.11	477	0.38
313	10.41	34.15	1.82	26.24	100	23.65	34.98	23.75	416	0.49
406	8.54	34.21	2.45	26.60	150	21.15	35.18	24.60	334	0.68
506	7.06	34.24	2.94	26.83	200	19.41	34.98	24.91	304	0.84
601	6.08	34.32	3.13	27.03	250	14.20	34.40	25.70	230	0.98
800	5.05	34.40	3.13	27.22	300	10.77	34.16	26.18	184	1.09
1002	4.16	34.45	3.06	27.36	400	8.65	34.21	26.57	147	1.26
1207	3.62	34.43	3.06	27.39	500	7.14	34.24	26.82	123	1.40
					600	6.08	34.32	27.02	104	1.52
					700	5.50	34.37	27.13	94	1.63
					800	5.05	34.41	27.22	85	1.73
					1000	4.16	34.46	27.36	72	1.91
23	HUGH M. SMITH; October 30, 1951; 1453, 1553 GCT; 19°44'N, 156°44'W; sounding, 2525 fm; wind, 220°, 16 kt; weather, overcast; sea, slight; wire angle, 48°, 62°.									
0	26.10	34.86	0.25	22.91	0	26.13	34.86	22.90	496	0.00
7	26.12	34.83	0.31	22.89	10	26.13	34.83	22.88	498	0.05
19	26.14	34.83	0.29	22.88	20	26.13	34.83	22.88	498	0.10
36	25.37	34.86	0.28	23.14	30	26.01	34.84	22.93	494	0.15
68	23.21	34.97	0.35	23.87	50	24.00	34.92	23.60	430	0.24
129	19.74	35.12	0.46	24.94	75	22.90	35.01	23.99	393	0.35
183	16.33	34.63	0.72	25.41	100	21.53	35.22	24.53	341	0.44
233	13.58	34.32	1.30	25.77	150	18.72	34.96	25.08	289	0.60
282	10.52	34.14	1.85	26.21	200	15.23	34.50	25.55	244	0.73
325	9.02	34.18	2.21	26.49	250	12.60	34.24	25.90	211	0.85
424	7.04	34.19	2.82	26.80	300	9.80	34.14	26.33	170	0.95
514	6.40	34.34	2.87	27.00	400	7.35	34.19	26.75	130	1.10
645	5.80	34.38	3.10	27.11	500	6.50	34.34	26.98	108	1.23
					600	6.03	34.36	27.06	100	1.34
633	5.71	34.43	2.87	27.16	700	5.37	34.42	27.19	88	1.44
912	4.49	34.31	3.18	27.21	800	4.91	34.36	27.20	88	1.54
					1000	(4.20)	(34.31)	(27.23)	(84)	(1.73)
24	HUGH M. SMITH; October 31, 1951; 0042 GCT; 19°04'N, 156°38'W; sounding, 2580 fm; wind, 160°, 13 kt; weather, cloudy; sea, slight; wire angle, 32°.									
0	26.40	34.78	0.28	22.77	0	26.36	34.78	22.77	509	0.00
9	26.28	34.77	0.26	22.79	10	26.27	34.77	22.79	507	0.05
25	26.08	34.79	0.31	22.87	20	26.12	34.78	22.85	502	0.10
49	25.23	34.86	0.26	23.19	30	26.00	34.80	22.90	497	0.15
97	22.56	34.98	0.33	24.06	50	25.22	34.86	23.18	469	0.25
187	16.08	34.61	0.68	25.45	75	23.82	34.92	23.65	425	0.36
277	10.04	34.13	1.77	26.29	100	22.15	35.05	24.23	370	0.46
363	8.55a)	34.28	2.66	26.64	150	19.07	35.03	25.04	292	0.63
363	8.61a)	34.28	-	26.63	200	14.23	34.39	25.68	231	0.76
453	7.38	34.35	3.00	26.87	250	11.40	34.16	26.06	195	0.87
540	6.69	34.38	3.08	27.00	300	9.62	34.16	26.38	166	0.96
726	5.51	34.42	3.22	27.18	400	8.06	34.31	26.74	131	1.12
917	4.64	34.45	3.09	27.30	500	7.97	34.37	26.80	125	1.26
1115	4.00	34.47	3.12	27.39	600	6.30	34.40	27.06	101	1.38
					700	5.62	34.42	27.16	91	1.48
					800	5.17	34.43	27.22	85	1.58
					1000	4.32	34.46	27.34	74	1.76

a) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m

HUGH M. SMITH; October 31, 1951; 0742 GCT; 18°21'N, 156°38'W; sounding, 2600 fm; wind, 220°, 6 kt; weather, cloudy; sea, missing; wire angle, 00°. 25

0	26.30	34.78	0.28	22.80	0	26.28	34.78	22.80	506	0.00
10	26.25	34.77	0.29	22.80	10	26.25	34.77	22.80	506	0.05
25	26.16	34.81	0.29	22.86	20	26.19	34.80	22.84	502	0.10
55	26.18	34.82	0.35	22.86	30	26.13	34.81	22.87	500	0.15
110	25.03	34.80	0.36	23.20	50	26.17	34.82	22.86	500	0.25
219	16.13	34.44	0.98	25.31	75	26.07	34.82	22.89	497	0.38
328	9.40	34.22	2.25	26.46	100	25.68	34.81	23.01	486	0.50
441	7.38	34.20	2.74	26.76	150	21.43	35.00	24.39	354	0.71
548	6.42	34.32	3.08	26.98	200	18.42	34.75	24.99	297	0.88
655	5.80	34.41	3.10	27.13	250	13.21	34.30	25.82	218	1.01
866	4.86	34.43	3.20	27.26	300	10.40	34.24	26.31	172	1.11
1076	4.04	34.49	3.16	27.40	400	7.99	34.20	26.66	138	1.27
1277	3.46	34.51	3.16	27.47	500	6.78	34.24	26.87	119	1.41
					600	6.12	34.38	27.06	100	1.53
					700	5.56	34.42	27.17	91	1.63
					800	5.11	34.43	27.23	85	1.73
					1000	4.40	34.47	27.34	74	1.90

HUGH M. SMITH; October 31, 1951; 1700 GCT; 18°03'N, 155°33'W; sounding, 2625 fm; wind, 110°, 12 kt; weather, cloudy; sea, slight; wire angle, 00°. 26

0	25.60	- a)	0.34	-	0	25.64	34.69	22.93	494	0.00
10	25.84	34.69	0.35b)	22.87	10	25.84	34.69	22.87	500	0.05
25	25.84	34.71	0.40	22.88	20	25.84	34.70	22.87	499	0.10
55	25.77	34.84	0.39	23.00	30	25.84	34.73	22.90	497	0.15
109	21.94	34.97	0.40	24.23	50	25.79	34.83	22.99	488	0.25
217	13.93	34.27	1.43	25.66	75	25.62	34.85	23.05	482	0.37
324	9.01	34.12	2.16	26.45	100	22.32	34.94	24.10	382	0.48
437	7.68c)	34.34	2.96	26.82	150	20.55	34.99	24.62	332	0.66
437	7.72c)	34.34	-	26.82	200	15.60	34.40	25.39	259	0.81
544	6.70	34.39	3.14	27.00	250	11.31	34.12	26.05	197	0.93
652	5.88	34.42	3.23	27.13	300	9.48	34.09	26.34	168	1.02
864	4.83	34.47	3.28b)	27.30	400	8.09	34.28	26.71	134	1.18
1079	3.96	34.49	3.18	27.41	500	7.08	34.37	26.93	113	1.31
1288	3.39	34.55	3.14	27.50	600	6.24	34.41	27.07	99	1.42
					700	5.55	34.44	27.18	89	1.53
					800	5.09	34.47	27.26	81	1.62
					1000	4.38	34.48	27.35	73	1.79

HUGH M. SMITH; November 1, 1951; 0255 GCT; 18°40'N, 154°28'W; sounding, 2900 fm; wind, 060°, 10 kt; weather, cloudy; sea, slight; wire angle, 22°. 27

0	26.10	34.65	0.35	22.76	0	26.09	34.65	22.76	510	0.00
9	26.06	34.62	0.33	22.75	10	26.06	34.62	22.74	511	0.05
23	25.92	34.70	0.36	22.85	20	25.98	34.68	22.81	505	0.10
45	25.88	34.74	0.42	22.89	30	25.90	34.71	22.86	500	0.15
91	25.03	34.78	0.43	23.19	50	25.88	34.74	22.89	497	0.25
185	18.06	34.69	0.73	25.04	75	25.88	34.74	22.89	497	0.38
273	10.70	34.23	2.03	26.25	100	23.90	34.82	23.55	434	0.50
367	8.89c)	34.40	2.72	26.69	150	20.38	34.92	24.61	333	0.69
367	8.95c)	34.40	-	26.67	200	16.82	34.58	25.25	273	0.84
455	7.65	34.39	2.99	26.87	250	11.60	34.25	26.10	192	0.96
548	6.80	34.42	3.11	27.01	300	10.12	34.28	26.38	165	1.05
732	5.62	34.44	3.23	27.18	400	8.41	34.39	26.75	130	1.21
916	4.74	34.45	3.19	27.29	500	7.23	34.41	26.94	112	1.34
1114	4.09	34.43	3.02	27.35	600	6.44	34.43	27.06	100	1.45
					700	5.80	34.44	27.15	92	1.56
					800	5.27	34.45	27.22	85	1.65
					1000	4.44	34.44	27.31	77	1.84

a) No sample.
b) Alternate values: 10 meters, 0.41; 864, 3.33 µg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.
c) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

HBL

HMS-12

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
28	HUGH M. SMITH; November 1, 1951; 0849 GCT; 19°16'N, 154°32'W; sounding, 2800 fm; wind, 080°, 9 kt; weather, overcast; sea, slight; wire angle, 18°.									
0	25.90	34.87	0.36	22.97	0	25.94	34.87	22.97	490	0.00
10	25.96	34.82	0.38	22.93	10	25.96	34.82	22.93	494	0.05
24	25.76	34.87	0.39	23.03	20	25.82	34.87	23.01	486	0.10
51	25.66	34.87	0.39	23.06	30	25.71	34.87	23.04	483	0.15
103	25.48	34.89	0.37	23.13	50	25.66	34.87	23.06	481	0.24
203	17.38	34.52	0.81	25.07	75	25.58	34.88	23.09	479	0.36
301	10.52	- a)	2.47	-	100	25.50	34.88	23.11	476	0.48
405	7.80b)	34.20	2.66	26.70	150	21.62	34.77	24.16	376	0.70
405	7.86b)	34.20	- c)	26.69	200	17.50	34.53	25.05	292	0.87
505	6.80	34.24	2.95c)	26.87	250	12.42	34.23	25.93	208	1.00
604	6.14	34.36	3.12	27.05	300	10.52	34.20	26.25	177	1.10
799	5.00	34.44	3.24	27.26	400	7.96	34.20	26.67	138	1.26
999	4.52	34.46	3.17	27.31	500	6.84	34.23	26.85	120	1.40
1195	3.78	34.48	3.17c)	27.42	600	6.18	34.36	27.04	102	1.52
					700	5.59	34.41	27.15	92	1.62
					800	5.00	34.44	27.25	83	1.72
					1000	4.51	34.46	27.32	76	1.90
29	HUGH M. SMITH; November 1, 1951; 1532 GCT; 20°04'N, 154°33'W; sounding, 3000 fm; wind, 080°, 6 kt; weather, partly cloudy; sea, slight; wire angle, 08°.									
0	25.40	34.48	0.25	22.83	0	25.44	34.48	22.83	503	0.00
10	25.45	34.46	0.24	22.82	10	25.45	34.46	22.81	505	0.05
25	25.54	34.52	0.28	22.83	20	25.52	34.48	22.81	505	0.10
54	25.62	34.77	0.33	23.00	30	25.58	34.57	22.86	501	0.15
108	21.96	34.79	0.33	24.09	50	25.62	34.76	22.99	488	0.25
213	15.08	34.37	1.06d)	25.49	75	24.00	34.80	23.51	439	0.37
318	9.85	34.14	1.86	26.33	100	22.66	34.79	23.89	402	0.47
426	8.10e)	- a)	2.64	-	150	19.55	34.71	24.67	328	0.66
529	6.31	34.22	2.93	26.92	200	16.50	34.46	25.23	274	0.81
633	5.39	34.29	3.04	27.09	250	12.47	34.19	25.88	212	0.94
837	4.83	34.42	3.16	27.26	300	10.21	34.14	26.26	177	1.04
1042	4.13	34.44	3.03	27.35	400	8.54	34.17	26.56	148	1.20
1240	3.55	34.50	3.11	27.45	500	6.75	34.20	26.84	121	1.35
					600	5.64	34.27	27.04	103	1.47
					700	5.08	34.40	27.21	86	1.57
					800	4.88	34.42	27.25	83	1.66
					1000	4.37	34.43	27.31	77	1.84

a) No sample.

b) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

c) Alternate values: 405 meters, 2.71; 505, 3.00; 1195, 3.12 µg at/L. Values do not agree within 0.02 tolerance. Average values used in constructing phosphate-temperature curve.

d) Alternate value, 1.11 µg at/L. Values do not agree within 0.02 tolerance. Average value used in constructing phosphate-temperature curve.

e) Alternate value, 8.16°C. Values do not agree within 0.02 tolerance. Average value used in constructing temperature-depth curve.

OBSERVED				COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	PO_4-P	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	µg at/L	g/L	m	°C	‰	g/L	cl/ton	dyn m
HUGH M. SMITH; November 1, 1951; 2106 GCT; 20°38'N, 154°28'W; sounding, missing; wind, 080°, 9 kt; weather, cloudy; sea, slight; wire angle, 19°.										
0	25.70	34.62	0.19	22.85	0	25.73	34.62	22.85	502	0.00
9	25.71	34.66	0.23	22.89	10	25.71	34.67	22.89	498	0.05
23	25.75	34.73	0.31	22.93	20	25.74	34.72	22.92	495	0.10
52	25.71	34.86	0.25	23.04	30	25.74	34.77	22.96	491	0.15
101	23.18	34.75	0.33	23.71	50	25.72	34.86	23.03	484	0.25
198	16.09	34.43	0.88	25.31	75	25.62	34.87	23.07	480	0.37
297	10.86	34.11	1.54	26.13	100	23.50	34.76	23.62	427	0.48
398	8.91a)	34.25	2.53	26.56	150	19.62	34.70	24.65	330	0.67
398	8.97a)	34.25	-	26.55	200	15.95	34.43	25.33	264	0.82
495	7.20	34.30	2.90	26.86	250	12.55	34.19	25.87	214	0.95
594	6.39	34.32	3.02	26.99	300	10.80	34.11	26.13	188	1.05
788	5.24	34.35	3.16	27.15	400	8.90	34.25	26.56	148	1.23
989	4.43	34.42	3.04	27.30	500	7.16	34.30	26.86	119	1.37
1191	3.72	34.47	3.10	27.41	600	6.35	34.32	26.99	107	1.49
					700	5.78	34.33	27.07	100	1.60
					800	5.21	34.35	27.15	92	1.71
					1000	4.40	34.42	27.30	78	1.90

a) Thermometers did not agree within 0.02°C tolerance. Average value used in constructing temperature-depth curve.

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 4, 1951; 2100 GCT; 48°17'N, 123°34'W; sounding, 56 m; wind, missing; weather, fog; sea, smooth. J1

1	8.19	30.98	24.12	0	(8.19)	(30.98)	(24.12)	(380)	(0.00)
11	8.15	31.12	24.23	10	8.16	31.10	24.22	371	0.04
26	7.89	31.55	24.61	20	7.98	31.41	24.48	346	0.07
51	7.76	31.76	24.79	30	7.84	31.63	24.68	327	0.11
				50	7.76	31.76	24.79	317	0.17

HMCS CEDARWOOD; May 5, 1951; 0000 GCT; 48°21'N, 123°57'W; sounding, 120 m; wind, 320°, force 3; weather, rain; sea, slight. J2

1	8.14	31.65	24.65	0	(8.14)	(31.65)	(24.65)	(330)	(0.00)
5	8.14	31.65	24.65	10	8.10	31.67	24.67	328	0.03
10	8.10	31.67	24.67	20	8.00	31.71	24.72	323	0.07
15	8.05	31.71	24.71	30	7.83	31.78	24.80	316	0.10
20	8.00	31.71	24.72	50	7.70	31.95	24.95	301	0.16
30	7.83	31.78	24.80	75	7.22	32.70	25.60	240	0.23
50	7.70	31.95	24.95	100	6.84	33.29	26.12	190	0.28
80	7.14	32.83	25.71						
100	6.84	33.29	26.12						

HMCS CEDARWOOD; May 5, 1951; 0200 GCT; 48°23'N, 124°21'W; sounding, 192 m; wind, 040°, force 1; weather, cloudy; sea, slight. J3

1	8.41	31.83	24.75	0	(8.41)	(31.83)	(24.75)	(320)	(0.00)
5	8.34	31.83	24.76	10	5.19	31.95	25.26	272	0.03
10	5.19	31.95	25.26	20	7.68	31.96	24.96	300	0.06
15	7.80	31.96	24.94	30	7.66	32.04	25.02	295	0.09
20	7.68	31.96	24.96	50	7.67	32.12	25.08	289	0.15
25	7.64	32.00	24.99	75	7.33	32.69	25.58	242	0.21
35	7.68	32.07	25.04	100	7.22	33.27	26.05	197	0.27
50	7.67	32.12	25.08	150	6.56	33.81	26.56	148	0.36
75	7.33	32.69	25.58						
100	7.22	33.27	26.05						
150	6.56	33.81	26.56						

HMCS CEDARWOOD; May 5, 1951; 0400 GCT; 48°27'N, 124°43'W; sounding, 201 m; wind, 220°, force 1; weather, overcast; sea, slight. A1

1	9.87	30.76	23.69	0	(9.87)	(30.76)	(23.69)	(420)	(0.00)
5	9.86	30.77	23.70	10	9.31	31.26	24.17	376	0.04
10	9.31	31.26	24.17	20	8.55	32.05	24.90	306	0.07
15	8.61	31.84	24.73	30	7.81	32.20	25.13	284	0.10
20	8.55	32.05	24.90	50	7.59	32.60	25.47	252	0.16
25	7.90	32.05	25.00	75	7.20	33.29	26.07	195	0.21
35	7.73	32.33	25.24	100	7.23	33.33	26.09	193	0.26
50	7.59	32.60	25.47	150	7.06	33.79	26.48	156	0.35
75	7.20	33.29	26.07						
100	7.23	33.33	26.09						
150	7.06	33.79	26.48						
180	6.96	33.82	26.52						

HMCS CEDARWOOD; May 5, 1951; 1100 GCT; 48°26'N, 125°49'W; sounding, 137 m; wind, 160°, force 2; weather, drizzle; sea, slight. A2

1	9.63	31.86	24.59	0	(9.63)	(31.86)	(24.59)	(336)	(0.00)
5	9.65	31.86	24.58	10	9.41	31.88	24.64	331	0.03
10	9.41	31.88	24.64	20	8.5	31.86	24.76	320	0.07
15	9.71	31.86	24.57	30	8.30	32.21	25.06	291	0.10
20	8.5	31.86	24.76	50	7.32	32.60	25.51	248	0.15
25	8.53	32.10	24.94	75	7.10	33.10	25.93	208	0.21
35	8.07	32.31	25.18	100	7.05	33.57	26.31	172	0.26
50	7.32	32.60	25.51						
75	7.10	33.10	25.93						
100	7.05	33.57	26.31						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
A3	HMCS CEDARWOOD; May 5, 1951; 1700 GCT; 48°27'N, 126°52'W; sounding, 2560 m; wind, 110°, force 3; weather, cloudy; sea, slight.								
2	9.39	31.86	24.62	0	(9.39)	(31.86)	(24.62)	(333)	(0.00)
10	9.34	31.88	24.65	10	9.34	31.88	24.65	330	0.03
20	9.02	31.90	24.71	20	9.02	31.90	24.71	324	0.07
30	7.61	32.05	25.04	30	7.61	32.05	25.04	293	0.10
50	7.01	32.21	25.25	50	7.01	32.21	25.25	273	0.15
75	6.54	32.41	25.46	75	6.54	32.41	25.46	253	0.22
100	7.15	32.96	25.82	100	7.15	32.96	25.82	219	0.28
150	7.43	33.74	26.39	150	7.43	33.74	26.39	164	0.38
200	6.84	33.88	26.58	200	6.84	33.88	26.58	146	0.46
300	6.06	33.97	26.75	250	6.43	33.93	26.67	138	0.53
400	5.43	34.03	26.88	300	6.06	33.97	26.75	130	0.60
600	4.65	34.16	27.07	400	5.43	34.03	26.88	118	0.72
800	4.02	34.27	27.23	500	5.02	34.10	26.98	109	0.84
1000	3.46	-	-	600	4.65	34.16	27.07	100	0.95
				800	4.02	34.27	27.23	85	1.15
				1000	3.46	34.36	27.35	74	1.32
				1200	(2.97)	(34.43)	(27.46)	(63)	(1.48)
A5	HMCS CEDARWOOD; May 6, 1951; 0500 GCT; 48°27'N, 129°09'W; sounding, missing; wind, 140°, force 3; weather, overcast; sea, slight.								
2	8.70	32.17	24.97	0	(8.70)	(32.17)	(24.97)	(300)	(0.00)
10	8.69	32.17	24.97	10	8.69	32.17	24.97	300	0.03
20	8.69	32.19	24.99	20	8.69	32.19	24.99	298	0.06
30	8.33	32.36	25.18	30	8.33	32.36	25.18	280	0.09
40	8.09	32.41	25.25	50	7.13	32.41	25.39	260	0.14
50	7.13	32.41	25.39	75	6.72	32.45	25.47	252	0.21
75	6.72	32.45	25.47	100	6.6	32.46	25.50	249	0.27
100	6.6	32.46	25.50	150	6.40	33.41	26.27	176	0.38
150	6.40	33.41	26.27	200	6.31	33.53	26.37	166	0.46
200	6.31	33.53	26.37	250	5.84	33.72	26.58	146	0.54
300	5.43	33.86	26.74	300	5.43	33.86	26.74	131	0.61
400	4.78	33.96	26.90	400	4.78	33.96	26.90	116	0.74
500	4.49	34.06	27.01	500	4.49	34.06	27.01	106	0.86
700	4.07	34.22	27.18	600	4.30	34.15	27.10	97	0.96
900	3.53	34.31	27.31	800	3.82	34.27	27.25	83	1.16
A6	HMCS CEDARWOOD; May 6, 1951; 1100 GCT; 48°27'N, 130°10'W; sounding, missing; wind, 220°, force 3; weather, overcast; sea, slight.								
2	8.44	32.40	25.19	0	(8.44)	(32.40)	(25.19)	(279)	(0.00)
10	8.42	32.40	25.19	10	8.42	32.40	25.19	279	0.03
20	8.44	32.41	25.20	20	8.44	32.41	25.20	278	0.06
30	8.40	32.43	25.22	30	8.40	32.43	25.22	276	0.08
40	7.78	32.45	25.33	50	7.05	32.41	25.40	259	0.14
50	7.05	32.41	25.40	75	6.61	32.48	25.51	248	0.20
75	6.61	32.48	25.51	100	6.46	32.71	25.71	229	0.26
100	6.46	32.71	25.71	150	6.50	33.46	26.30	173	0.36
150	6.50	33.46	26.30	200	6.23	33.57	26.42	162	0.45
200	6.23	33.57	26.42	250	5.85	33.75	26.61	144	0.52
300	5.49	33.88	26.75	300	5.49	33.88	26.75	130	0.60
400	4.81	33.96	26.89	400	4.81	33.96	26.89	117	0.72
500	4.42	34.06	27.02	500	4.42	34.06	27.02	105	0.84
700	3.83	34.22	27.21	600	4.09	34.15	27.12	95	0.94
900	3.50	34.31	27.31	800	3.63	34.27	27.27	81	1.13

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 6, 1951; 1800 GCT; 48°27'N, 131°13'W; sounding, missing; wind, 220°, force 2; weather, overcast; sea, slight. A7

2	8.00	32.48	25.32	0	(8.00)	(32.48)	(25.32)	(266)	(0.00)
10	8.02	32.50	25.33	10	8.02	32.50	25.33	265	0.03
20	7.98	32.48	25.32	20	7.98	32.48	25.32	266	0.05
30	7.99	32.48	25.32	30	7.99	32.48	25.32	266	0.08
40	7.94	32.48	25.33	50	7.99	32.48	25.32	266	0.13
50	7.99	32.48	25.32	75	6.41	32.52	25.57	242	0.20
75	6.41	32.52	25.57	100	6.22	32.53	25.60	240	0.26
100	6.22	32.53	25.60	150	6.07	33.29	26.22	181	0.36
150	6.07	33.29	26.22	200	5.91	33.74	26.59	146	0.45
200	5.91	33.74	26.59	300	5.99	33.72	26.57	148	0.60
300	8.16u	-	-	400	6.06	33.70	26.54	150	0.75
400	6.06	33.70	26.54	500	4.75	33.93	26.88	118	0.89
500	4.75	33.93	26.88	600	4.36	34.04	27.01	106	1.01
700	4.02	34.13	27.11	800	3.73	34.22	27.22	86	1.21
900	3.49	34.29	27.29						

HMCS CEDARWOOD; May 7, 1951; 0100 GCT; 48°27'N, 132°25'W; sounding, missing; wind, 180°, force 1; weather, cloudy; sea, slight. A8

2	8.50	32.52	25.28	0	(8.50)	(32.52)	(25.28)	(270)	(0.00)
10	8.06	32.52	25.34	10	8.06	32.52	25.34	264	0.03
20	7.99	32.52	25.35	20	7.99	32.52	25.35	263	0.05
30	7.98	32.52	25.35	30	7.98	32.52	25.35	263	0.08
40	7.92	32.55	25.39	50	6.49	32.53	25.56	243	0.13
50	6.49	32.53	25.56	75	6.07	32.57	25.65	235	0.19
75	6.07	32.57	25.65	100	5.91	32.72	25.79	222	0.25
100	5.91	32.72	25.79	150	5.68	33.46	26.40	164	0.34
150	5.68	33.46	26.40	200	5.54	33.72	26.62	143	0.42
200	5.54	33.72	26.62	250	5.30	33.81	26.72	133	0.49
300	5.02	33.88	26.81	300	5.02	33.88	26.81	125	0.56
400	4.38	33.98	26.96	400	4.38	33.98	26.96	110	0.68
500	4.09	34.05	27.04	500	4.09	34.05	27.04	103	0.79
700	3.64	34.22	27.22	600	3.84	34.13	27.13	94	0.89
				800	(3.48)	(34.32)	(27.32)	(76)	(1.08)

HMCS CEDARWOOD; May 7, 1951; 0600 GCT; 48°32'N, 133°16'W; sounding, missing; wind, 150°, force 2; weather, cloudy; sea, slight. A9

2	7.67	32.58	25.44	0	(7.67)	(32.58)	(25.44)	(255)	(0.00)
10	7.54	32.58	25.46	10	7.54	32.58	25.46	253	0.02
20	7.57	32.58	25.46	20	7.57	32.58	25.46	253	0.05
30	7.47	32.58	25.47	30	7.47	32.58	25.47	252	0.08
40	7.42	32.58	25.48	50	6.89	32.58	25.55	244	0.13
50	6.89	32.58	25.55	75	5.95	32.60	25.69	231	0.18
75	5.95	32.60	25.69	100	5.80	32.78	25.85	216	0.24
100	5.80	32.78	25.85	150	5.31	33.62	26.57	148	0.33
150	5.31	33.62	26.57	200	5.04	33.79	26.73	132	0.40
200	5.04	33.79	26.73	250	4.78	33.85	26.81	125	0.47
300	4.55	33.91	26.88	300	4.55	33.91	26.88	118	0.53
364	-	33.98	-	400	4.17	34.00	27.00	107	0.65
400	4.17	34.00	27.00	500	4.03	34.12	27.11	96	0.75
500	4.03	34.12	27.11	600	3.81	34.19	27.18	90	0.85
700	3.51	34.25	27.26	800	3.13	34.31	27.34	74	1.02
900	-	34.36	-						

POG

C-I

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
A10	HMCS CEDARWOOD; May 7, 1951; 1200 GCT; 48°27'N, 134°12'W; sounding, missing; wind, 140°, force 2; weather, overcast; sea, slight.								
2	7.58	32.58	25.46	0	(7.58)	(32.58)	(25.46)	(253)	(0.00)
10	7.48	32.60	25.49	10	7.48	32.60	25.49	250	0.02
20	7.44	32.60	25.49	20	7.44	32.60	25.49	250	0.05
30	7.30	32.60	25.51	30	7.30	32.60	25.51	248	0.08
40	7.23	32.60	25.52	50	7.13	32.60	25.54	245	0.12
50	7.13	32.60	25.54	75	6.01	32.62	25.70	230	0.18
75	6.01	32.62	25.70	100	5.64	32.62	25.74	226	0.24
100	5.64	32.62	25.74	150	5.67	33.40	26.35	168	0.34
150	5.67	33.40	26.35	200	5.1	33.74	26.69	136	0.42
200	5.1	33.74	26.69	250	4.84	33.84	26.80	126	0.48
300	4.61	33.91	26.88	300	4.61	33.91	26.88	118	0.55
364	-	33.96	-	400	4.26	34.00	26.99	108	0.66
400	4.26	34.00	26.99	500	4.02	34.08	27.07	100	0.77
500	3.98u	34.08	27.08	600	3.79	34.16	27.16	92	0.87
700	3.57	34.22	27.23	800	3.37	34.28	27.30	78	1.05
900	3.18	34.32	27.35						
A11	HMCS CEDARWOOD; May 7, 1951; 1800 GCT; 48°27'N, 135°10'W; sounding, missing; wind, 140°, force 2; weather, fog; sea, slight.								
2	7.64	32.53	25.41	0	(7.64)	(32.53)	(25.41)	(258)	(0.00)
10	7.59	32.57	25.45	10	7.59	32.57	25.45	254	0.03
20	7.69	32.55	25.42	20	7.69	32.55	25.42	257	0.05
30	7.50	32.58	25.47	30	7.50	32.58	25.47	252	0.08
40	7.47	32.57	25.47	50	6.78	32.57	25.56	243	0.13
50	6.78	32.57	25.56	75	5.99	32.58	25.67	233	0.19
75	5.99	32.58	25.67	100	5.8	32.60	25.71	229	0.24
100	5.8	32.60	25.71	150	5.64	33.45	26.40	164	0.34
150	5.64	33.45	26.40	200	5.46	33.74	26.65	140	0.42
200	5.46	33.74	26.65	250	5.05	33.82	26.76	129	0.49
300	4.71	33.88	26.84	300	4.71	33.88	26.84	122	0.55
364	-	33.91	-	400	4.23	33.96	26.96	110	0.67
400	4.23	33.96	26.96	500	3.98	34.03	27.04	103	0.78
500	3.98	34.03	27.04	600	3.76	34.13	27.14	93	0.89
700	3.56	34.20	27.22	800	3.37	34.26	27.28	80	1.07
900	3.20	34.29	27.32						
A12	HMCS CEDARWOOD; May 8, 1951; 0000 GCT; 48°25'N, 136°13'W; sounding, missing; wind, 240°, force 3; weather, fog; sea, slight.								
2	7.70u	32.65	25.50	0	(7.16)	(32.65)	(25.57)	(242)	(0.00)
10	7.37	32.65	25.54	10	7.37	32.65	25.54	245	0.02
20	7.42	32.65	25.53	20	7.42	32.65	25.53	246	0.05
30	7.36u	32.65	25.54	30	7.35	32.65	25.54	245	0.07
40	7.04	32.67	25.60	50	6.5	32.72	25.71	229	0.12
50	6.5	32.72	25.71	75	6.10	32.74	25.78	222	0.18
75	6.10	32.74	25.78	100	5.70	32.74	25.83	218	0.23
100	5.70	32.74	25.83	150	5.36	33.53	26.49	155	0.33
150	5.36	33.53	26.49	200	5.0	33.74	26.70	135	0.40
200	5.0	33.74	26.70	250	4.78	33.81	26.78	128	0.47
300	4.57	33.86	26.84	300	4.57	33.86	26.84	122	0.53
364	-	33.91	-	400	4.15	33.98	26.98	109	0.65
400	4.15	33.98	26.98	500	3.92	34.06	27.07	100	0.76
500	3.92	34.06	27.07	600	3.72	34.16	27.17	91	0.86
700	3.52	34.24	27.25	800	3.34	34.29	27.31	77	1.04
900	3.16	34.32	27.35						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 8, 1951; 0600 GCT; 48°25'N, 137°12'W; sounding, missing; wind, 140°, force 2; weather, fog; sea, slight. AI3

2	7.53	32.69	25.55	0	(7.53)	(32.69)	(25.55)	(244)	(0.00)
10	6.93	32.69	25.63	10	6.93	32.69	25.63	237	0.02
20	6.98	32.70	25.63	20	6.98	32.70	25.63	237	0.05
30	6.81	32.71	25.66	30	6.81	32.71	25.66	234	0.07
40	6.74	32.69	25.66	50	6.59	32.71	25.69	231	0.12
50	6.59	32.71	25.69	75	5.52	32.71	25.83	218	0.17
75	5.52	32.71	25.83	100	5.50	32.71	25.83	218	0.23
100	5.50	32.71	25.83	150	5.25	33.69	26.63	142	0.32
150	5.25	33.69	26.63	200	4.69	33.76	26.75	130	0.39
200	4.69	33.76	26.75	250	4.48	33.80	26.80	126	0.45
300	4.30	33.84	26.86	300	4.30	33.84	26.86	120	0.52
364	-	33.91	-	400	4.05	33.98	26.99	108	0.63
400	4.05	33.98	26.99	500	3.82	34.05	27.07	100	0.74
500	3.75u	34.05	27.08	600	3.62	34.13	27.15	92	0.84
700	3.44	34.22	27.24	800	(3.28)	(34.32)	(27.34)	(74)	(1.02)

HMCS CEDARWOOD; May 8, 1951; 1200 GCT; 48°25'N, 138°12'W; sounding, missing; wind, 140°, force 4; weather, clear; sea, slight. AI4

4	7.15	32.71	25.62	0	(7.15)	(32.71)	(25.62)	(238)	(0.00)
14	7.23	32.72	25.62	10	7.22	32.71	25.61	239	0.02
24	7.12	32.74	25.65	20	7.17	32.73	25.63	237	0.05
34	6.98	32.76	25.68	30	7.03	32.76	25.67	233	0.07
44	6.88	32.74	25.68	50	6.73	32.73	25.69	231	0.12
69	6.26	32.72	25.74	75	6.09	32.72	25.76	224	0.18
94	5.65	32.72	25.82	100	5.62	32.86	25.93	208	0.23
144	5.33	33.57	26.53	150	5.27	33.59	26.55	149	0.32
194	4.88	33.74	26.71	200	4.86	33.75	26.72	133	0.39
294	4.53	33.86	26.85	250	4.69	33.80	26.78	128	0.46
358	-	33.96	-	300	4.50	33.87	26.86	120	0.52
394	4.13	34.00	27.00	400	4.12	34.00	27.00	107	0.64
494	3.89	34.05	27.06	500	3.87	34.05	27.07	100	0.74
694	3.42	34.20	27.23	600	3.62	34.13	27.15	92	0.84
894	3.09	34.32	27.36	800	3.23	34.27	27.30	78	1.02

HMCS CEDARWOOD; May 8, 1951; 1800 GCT; 48°27'N, 139°21'W; sounding, missing; wind, 110°, force 5; weather, overcast; sea, slight. AI5

2	6.61	32.62	25.62	0	(6.61)	(32.62)	(25.62)	(238)	(0.00)
10	6.93	32.65	25.60	10	6.93	32.65	25.60	240	0.02
20	6.99	32.65	25.59	20	6.99	32.65	25.59	240	0.05
30	6.92	32.65	25.60	30	6.92	32.65	25.60	240	0.07
40	6.89	32.65	25.61	50	6.25	32.65	25.69	231	0.12
50	6.25	32.65	25.69	75	5.56	32.69	25.80	221	0.18
75	5.56	32.69	25.80	100	5.40	32.72	25.85	216	0.23
100	5.40	32.72	25.85	150	5.16	33.67	26.63	142	0.32
150	5.16	33.67	26.63	200	4.65	33.70	26.71	134	0.39
200	4.65	33.70	26.71	250	4.40	33.80	26.81	125	0.46
300	4.20	33.88	26.90	300	4.20	33.88	26.90	116	0.52
364	-	33.96	-	400	3.98	34.02	27.03	104	0.63
400	3.98	34.02	27.03	500	3.82	34.09	27.10	97	0.74
500	3.82	34.09	27.10	600	3.65	34.16	27.18	90	0.83
700	3.47	34.22	27.24	800	3.30	34.27	27.30	78	1.01
900	3.12	34.31	27.35						

POG

C-I

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
A16	HMCS CEDARWOOD; May 9, 1951; 0000 GCT; 48°27'N, 140°35'W; sounding, missing; wind, 160°, force 6; weather, rain; sea, slight.								
2	6.54	32.60	25.61	0	(6.54)	(32.60)	(25.61)	(239)	(0.00)
10	6.51	32.64	25.65	10	6.51	32.64	25.65	235	0.02
20	6.58	32.64	25.64	20	6.58	32.64	25.64	236	0.05
30	6.53	32.64	25.65	30	6.53	32.64	25.65	235	0.07
40	6.23	32.64	25.68	50	6.16	32.62	25.68	232	0.12
50	6.16	32.62	25.68	75	5.47	32.69	25.82	219	0.17
75	5.47	32.69	25.82	100	5.08	32.78	25.93	208	0.23
100	5.08	32.78	25.93	150	5.03	33.70	26.66	139	0.32
150	5.03	33.70	26.66	200	4.76	33.81	26.78	128	0.38
200	4.74u	33.81	26.78	250	4.53	33.85	26.84	122	0.45
300	4.33	33.89	26.89	300	4.33	33.89	26.89	117	0.51
364	-	33.96	-	400	4.04	34.02	27.03	104	0.62
400	4.04	34.02	27.03	500	3.86	34.08	27.09	98	0.73
500	3.86	34.08	27.09	600	3.66	34.17	27.18	90	0.82
700	3.47	34.24	27.26	800	3.29	34.29	27.31	77	1.00
900	3.12	34.31	27.35						
B1	HMCS CEDARWOOD; May 9, 1951; 0600 GCT; 49°07'N, 140°35'W; sounding, missing; wind, 110°, force 6; weather, fog; sea, slight.								
2	6.78	32.62	25.60	0	(6.78)	(32.62)	(25.60)	(240)	(0.00)
10	6.78	32.65	25.62	10	6.78	32.65	25.62	238	0.02
20	6.84	32.67	25.63	20	6.84	32.67	25.63	237	0.05
30	6.83	32.67	25.63	30	6.83	32.67	25.63	237	0.07
40	6.58	32.67	25.66	50	6.34	32.67	25.69	231	0.12
50	6.34	32.67	25.69	75	5.73	32.67	25.77	223	0.18
75	5.73	32.67	25.77	100	5.41	32.76	25.88	213	0.23
100	5.41	32.76	25.88	150	5.00	33.72	26.68	137	0.32
150	5.00	33.72	26.68	200	4.50	33.81	26.81	125	0.38
200	4.50	33.81	26.81	250	4.35	33.86	26.87	119	0.45
300	4.21	33.93	26.94	300	4.21	33.93	26.94	112	0.51
364	-	34.03	-	400	3.93	34.03	27.04	103	0.62
400	3.93	34.03	27.04	500	3.79	34.11	27.12	95	0.72
500	3.70u	34.11	27.13	600	3.63	34.18	27.19	89	0.82
700	3.45	34.25	27.27	800	3.25	34.31	27.33	75	0.99
900	3.04	34.37	27.40						
B2	HMCS CEDARWOOD; May 9, 1951; 1200 GCT; 49°23'N, 140°35'W; sounding, missing; wind, 140°, force 1; weather, fog; sea, slight.								
2	6.57	32.55	25.57	0	(6.57)	(32.55)	(25.57)	(242)	(0.00)
10	6.56	32.55	25.57	10	6.56	32.55	25.57	242	0.02
20	6.65	32.62	25.61	20	6.65	32.62	25.61	239	0.05
30	6.6	32.58	25.59	30	6.6	32.58	25.59	240	0.07
40	6.21	32.58	25.64	50	6.03	32.58	25.66	234	0.12
50	6.03	32.58	25.66	75	5.14	32.60	25.78	222	0.18
75	5.14	32.60	25.78	100	5.09	32.62	25.80	221	0.23
100	5.09	32.62	25.80	150	4.78	33.62	26.63	142	0.32
150	4.78	33.62	26.63	200	4.64	33.77	26.76	129	0.39
200	4.64	33.77	26.76	250	4.42	33.85	26.85	121	0.46
300	4.23	33.93	26.93	300	4.23	33.93	26.93	113	0.52
364	-	34.02	-	400	3.97	34.05	27.06	101	0.63
400	3.97	34.05	27.06	500	3.82	34.13	27.14	93	0.73
500	3.82	34.13	27.14	600	3.65	34.19	27.20	88	0.82
700	3.47	34.25	27.26	800	3.27	34.31	27.33	75	1.00
900	3.06	34.36	27.39						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

C-1

HMCS CEDARWOOD; May 9, 1951; 1800 GCT; 50°28'N, 140°35'W; sounding, missing; wind, 090°, force 2; weather, fog; sea, slight. C1

2	6.71	32.57	25.57	0	(6.71)	(32.57)	(25.57)	(242)	(0.00)
10	6.70	32.57	25.57	10	6.70	32.57	25.57	242	0.02
20	6.75	32.58	25.57	20	6.75	32.58	25.57	242	0.05
30	6.68	32.60	25.60	30	6.68	32.60	25.60	240	0.07
40	5.38	32.60	25.75	50	5.25	32.62	25.79	222	0.12
50	5.25	32.62	25.79	75	5.13	32.60	25.78	222	0.18
75	5.13	32.60	25.78	100	5.07	32.72	25.88	213	0.23
100	5.07	32.72	25.88	150	4.90	33.67	26.66	139	0.32
150	4.90	33.67	26.66	200	4.87	33.84	26.79	127	0.38
200	4.87	33.84	26.79	250	4.62	33.89	26.86	120	0.45
300	4.40	33.94	26.92	300	4.40	33.94	26.92	114	0.51
364	-	34.00	-	400	4.03	34.02	27.03	104	0.62
400	4.03	34.02	27.03	500	3.88	34.15	27.14	93	0.72
500	3.88	34.15	27.14	600	3.78	34.23	27.22	86	0.82
700	3.63	34.29	27.28	800	3.42	34.34	27.34	74	0.99
900	3.16	34.37	27.39						

HMCS CEDARWOOD; May 10, 1951; 0000 GCT; 50°27'N, 139°34'W; sounding, missing; wind, 110°, force 2; weather, overcast; sea, slight. C2

2	7.21	32.62	25.54	0	(7.21)	(32.62)	(25.54)	(245)	(0.00)
10	7.05	32.62	25.56	10	7.05	32.62	25.56	243	0.02
20	7.02	32.62	25.57	20	7.02	32.62	25.57	242	0.05
30	6.51	32.62	25.63	30	6.51	32.62	25.63	237	0.07
40	5.87	32.62	25.71	50	5.51	32.64	25.77	223	0.12
50	5.51	32.64	25.77	75	5.25	32.64	25.80	221	0.17
75	5.25	32.64	25.80	100	4.94	32.67	25.86	215	0.23
100	4.94	32.67	25.86	150	4.99	33.69	26.66	139	0.32
150	4.99	33.69	26.66	200	4.62	33.77	26.77	128	0.39
200	4.62	33.77	26.77	250	4.45	33.84	26.84	122	0.45
300	4.30	33.89	26.89	300	4.30	33.89	26.89	117	0.51
364	-	33.94	-	400	4.03	34.02	27.03	104	0.62
400	4.03	34.02	27.03	500	3.84	34.12	27.13	94	0.73
500	3.84	34.12	27.13	600	3.72	34.19	27.19	89	0.82
700	3.58	34.25	27.25	800	3.42	34.31	27.32	76	1.00
900	3.23	34.37	27.38						

HMCS CEDARWOOD; May 10, 1951; 0600 GCT; 50°28'N, 138°33'W; sounding, missing; wind, 140°, force 3; weather, overcast; sea, slight. C3

10	6.94	32.64	25.59	10	6.94	32.64	25.59	240
20	6.80	32.60	25.58	20	6.80	32.60	25.58	242
30	6.03	32.60	25.68	30	6.03	32.60	25.68	232
40	5.60	32.62	25.74	50	5.26	32.65	25.81	220
50	5.26	32.65	25.81	75	4.88	32.62	25.83	218
75	4.88	32.62	25.83	100	4.93	32.84	26.00	202
100	4.93	32.84	26.00	150	5.79	33.77	26.63	142
150	5.79	33.77	26.63	200	5.55	33.88	26.75	130
200	5.55	33.88	26.75	250	5.06	33.92	26.83	123
300	4.69	33.96	26.91	300	4.69	33.96	26.91	115
364	-	34.02	-	400	4.30	34.04	27.01	106
410	4.27	34.05	27.03	500	4.02	34.17	27.15	92
500	4.02	34.17	27.15	600	3.83	34.18	27.17	91
700	3.64	34.22	27.22	800	3.46	34.28	27.29	79
900	3.29	34.36	27.37					

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
C4	HMCS CEDARWOOD; May 10, 1951; 1200 GCT; 50°29'N, 137°30'W; sounding, missing; wind, 120°, force 5; weather, overcast; sea, slight.								
2	6.80	32.64	25.61	0	(6.80)	(32.64)	(25.61)	(239)	(0.00)
10	6.79	32.64	25.61	10	6.79	32.64	25.61	239	0.02
20	6.70	32.64	25.62	20	6.70	32.64	25.62	238	0.05
30	6.18	32.64	25.69	30	6.18	32.64	25.69	231	0.07
40	5.92	32.64	25.72	50	5.66	32.64	25.75	225	0.12
50	5.66	32.64	25.75	75	5.18	32.64	25.81	220	0.17
75	5.18	32.64	25.81	100	4.86	32.72	25.91	210	0.23
100	4.86	32.72	25.91	150	4.98	33.65	26.63	142	0.32
150	4.98	33.65	26.63	200	4.95	33.84	26.78	128	0.38
200	4.95	33.84	26.78	250	4.87	33.88	26.82	124	0.45
300	4.72u	33.94	26.89	300	4.77	33.94	26.88	118	0.51
364	-	34.05	-	400	4.54	34.08	27.02	105	0.62
400	4.54	34.08	27.02	500	4.25	34.17	27.12	95	0.73
500	4.25	34.17	27.12	600	3.96	34.22	27.19	89	0.82
700	3.68	34.27	27.26	800	3.42	34.32	27.33	75	1.00
900	3.18	34.37	27.39						
C5	HMCS CEDARWOOD; May 10, 1951; 1800 GCT; 50°31'N, 136°30'W; sounding, missing; wind, 110°, force 2; weather, overcast; sea, slight.								
2	7.06	32.60	25.54	0	(7.06)	(32.60)	(25.54)	(245)	(0.00)
10	7.02	32.60	25.55	10	7.02	32.60	25.55	244	0.02
20	6.91	32.58	25.55	20	6.91	32.58	25.55	244	0.05
30	6.44	32.60	25.63	30	6.44	32.60	25.63	237	0.07
40	6.34	32.60	25.64	50	5.90	32.57	25.67	233	0.12
50	5.90	32.57	25.67	75	5.35	32.62	25.77	223	0.18
75	5.35	32.62	25.77	100	5.09	32.69	25.86	215	0.23
100	5.09	32.69	25.86	150	5.77	33.74	26.61	144	0.32
150	5.77	33.74	26.61	200	5.36	33.86	26.75	140	0.39
200	5.36	33.86	26.75	250	5.00	33.93	26.85	121	0.46
300	4.73	33.98	26.92	300	4.73	33.98	26.92	114	0.52
364	-	34.02	-	400	4.46	34.08	27.03	104	0.63
400	4.46	34.08	27.03	500	4.21	34.19	27.14	93	0.73
500	4.21	34.19	27.14	600	4.02	34.23	27.19	89	0.83
700	3.80	34.27	27.25	800	3.55	34.31	27.30	78	1.00
900	3.28	34.36	27.37						
C7	HMCS CEDARWOOD; May 11, 1951; 0600 GCT; 50°32'N, 134°16'W; sounding, missing; wind, 060°, force 3; weather, clear; sea, slight.								
2	8.36	32.17	25.02	0	(8.36)	(32.17)	(25.02)	(295)	(0.00)
10	7.84	32.17	25.10	10	7.84	32.17	25.10	287	0.03
20	7.83	32.19	25.12	20	7.83	32.19	25.12	285	0.06
30	7.31	32.31	25.28	30	7.31	32.31	25.28	270	0.09
40	7.05	32.34	25.34	50	6.49	32.48	25.53	246	0.14
50	6.49	32.48	25.53	75	6.34	32.86	25.84	217	0.20
75	6.34	32.86	25.84	100	6.17	33.27	26.19	184	0.25
100	6.17	33.27	26.19	150	5.79	33.69	26.57	148	0.33
150	5.79	33.69	26.57	200	5.41	33.86	26.75	130	0.40
200	5.41	33.86	26.75	250	5.25	33.93	26.82	124	0.46
300	5.02	33.98	26.89	300	5.02	33.98	26.89	117	0.53
364	-	34.00	-	400	4.39	34.05	27.01	106	0.64
400	4.39	34.05	27.01	500	4.11	34.15	27.12	95	0.75
500	4.11	34.15	27.12	600	3.82	34.20	27.19	89	0.84
700	3.58	34.24	27.25	800	3.38	34.28	27.30	78	1.02
900	3.22	34.32	27.34						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

C8

HMCS CEDARWOOD; May 11, 1951; 1200 GCT; 50°32'N, 133°11'W; sounding, missing; wind, 360°, force 3; weather, fog; sea, slight.

2	8.12	32.26	25.13	0	(8.12)	(32.26)	(25.13)	(284)	(0.00)
10	8.12	32.26	25.13	10	8.12	32.26	25.13	284	0.03
20	8.02	32.28	25.16	20	8.02	32.28	25.16	281	0.06
30	7.24	32.41	25.37	30	7.24	32.41	25.37	262	0.08
40	6.78	32.50	25.50	50	6.49	32.60	25.62	238	0.13
50	6.49	32.60	25.62	75	5.67	32.60	25.72	228	0.19
75	5.67	32.60	25.72	100	5.24	32.67	25.83	218	0.25
100	5.24	32.67	25.83	150	6.63	33.79	26.54	150	0.34
150	6.63	33.79	26.54	200	6.28	33.94	26.70	135	0.41
200	6.28	33.94	26.70	250	5.91	33.97	26.77	128	0.48
300	5.61	34.00	26.83	300	5.61	34.00	26.83	123	0.54
364	5.34	34.05	26.90	400	5.16	34.06	26.93	113	0.67
400	5.16	34.06	26.93	500	4.56	34.15	27.07	100	0.78
500	4.56	34.15	27.07	600	4.33	34.22	27.15	92	0.88
700	4.09	34.27	27.22	800	3.85	34.30	27.27	81	1.07
900	3.61	34.32	27.31						

C9

HMCS CEDARWOOD; May 11, 1951; 1800 GCT; 50°32'N, 132°04'W; sounding, missing; wind, 360°, force 5; weather, overcast; sea, slight.

2	8.47	32.19	25.02	0	(8.47)	(32.19)	(25.02)	(295)	(0.00)
10	8.42	32.22	25.05	10	8.42	32.22	25.05	292	0.03
20	8.39	32.43	25.22	20	8.39	32.43	25.22	276	0.06
30	8.12	32.53	25.34	30	8.12	32.53	25.34	264	0.08
40	8.17	32.53	25.33	50	7.65	32.53	25.41	258	0.14
50	7.65	32.53	25.41	75	6.18	32.58	25.64	236	0.20
75	6.18	32.58	25.64	100	5.63	32.62	25.74	226	0.26
100	5.63	32.62	25.74	150	5.83	33.57	26.47	157	0.35
150	5.83	33.57	26.47	200	5.99	33.91	26.71	134	0.43
200	5.99	33.91	26.71	250	5.26	33.91	26.80	126	0.49
300	4.77	33.93	26.88	300	4.77	33.93	26.88	118	0.56
364	4.51	33.98	26.94	400	4.40	34.03	27.00	107	0.67
400	4.40	34.03	27.00	500	4.09	34.10	27.08	99	0.78
500	4.09	34.10	27.08	600	4.00	34.18	27.16	92	0.88
700	3.84	34.25	27.23	800	3.60	34.30	27.29	79	1.06
900	3.28	34.34	27.35						

C10

HMCS CEDARWOOD; May 12, 1951; 0000 GCT; 50°33'N, 130°59'W; sounding, missing; wind, 360°, force 2; weather, overcast; sea, slight.

2	8.60	32.38	25.15	0	(8.60)	(32.38)	(25.15)	(282)	(0.00)
10	8.56	32.38	25.16	10	8.56	32.38	25.16	281	0.03
20	8.46	32.38	25.17	20	8.46	32.38	25.17	280	0.06
30	8.20	32.43	25.25	30	8.20	32.43	25.25	273	0.08
40	7.55	32.45	25.36	50	6.95	32.46	25.45	254	0.14
50	6.95	32.46	25.45	75	5.93	32.53	25.63	237	0.20
75	5.93	32.53	25.63	100	5.77	32.69	25.78	222	0.26
100	5.77	32.69	25.78	150	6.19	33.55	26.41	163	0.35
150	6.19	33.55	26.41	200	5.88	33.82	26.66	139	0.43
200	5.88	33.82	26.66	250	5.29	33.91	26.80	126	0.50
300	4.91	33.98	26.90	300	4.91	33.98	26.90	116	0.56
364	4.72	-	-	400	4.64	34.10	27.02	105	0.67
400	4.64	34.10	27.02	500	4.47	34.15	27.08	99	0.78
500	4.47	34.15	27.08	600	4.23	34.24	27.18	90	0.88
700	3.99	34.31	27.26	800	3.74	34.36	27.33	75	1.06
900	3.48	34.39	27.38						

POG

C-I

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

C11

HMCS CEDARWOOD; May 12, 1951; 0500 GCT; 50°35'N, 129°52'W; sounding, missing; wind, 340°, force 2; weather, rain; sea, slight.

2	9.14	32.15	24.89	0	(9.14)	(32.15)	(24.89)	(307)	(0.00)
10	9.05	32.21	24.95	10	9.05	32.21	24.95	301	0.03
20	8.29	32.29	25.13	20	8.29	32.29	25.13	284	0.06
30	7.67	32.34	25.26	30	7.67	32.34	25.26	272	0.09
40	6.83	32.40	25.42	50	6.36	32.46	25.53	246	0.14
50	6.36	32.46	25.53	75	6.03	32.50	25.60	240	0.20
75	6.03	32.50	25.60	100	6.08	32.64	25.70	230	0.26
100	6.08	32.64	25.70	150	6.03	33.52	26.40	164	0.36
150	6.03	33.52	26.40	200	6.04	33.82	26.64	141	0.44
200	6.04	33.82	26.64	250	5.60	33.89	26.75	130	0.50
300	5.25	33.94	26.83	300	5.25	33.94	26.83	123	0.57
364	4.94	33.96	26.88	400	4.77	34.05	26.97	110	0.69
400	4.78u	34.05	26.97	500	4.37	34.08	27.04	103	0.80
500	4.37	34.08	27.04	600	4.17	34.15	27.11	96	0.90
700	3.97	34.22	27.19	800	3.78	34.29	27.27	81	1.09
900	3.59	34.36	27.34						

C13

HMCS CEDARWOOD; May 12, 1951; 2300 GCT; 50°25'N, 128°20'W; sounding, 173 m; wind, 270°, force 1; weather, cloudy; sea, slight.

1	10.70	31.76	24.33	0	(10.70)	(31.76)	(24.33)	(360)	(0.00)
10	10.72	31.96	24.48	10	10.72	31.96	24.48	346	0.04
20	8.09	32.07	24.99	20	8.09	32.07	24.99	298	0.07
30	7.12	32.26	25.27	30	7.12	32.26	25.27	271	0.10
40	6.65	32.38	25.43	50	6.54	32.50	25.53	246	0.15
50	6.54	32.50	25.53	75	6.50	32.76	25.74	226	0.21
75	6.50	32.76	25.74	100	7.10	33.20	26.01	201	0.26
100	7.10	33.20	26.01	150	6.42	33.76	26.54	150	0.35
150	6.42	33.76	26.54						

D1

HMCS CEDARWOOD; May 13, 1951; 0600 GCT; 50°43'N, 129°15'W; sounding, missing; wind, 290°, force 3; weather, rain; sea, slight.

2	9.09	32.14	24.89	0	(9.09)	(32.14)	(24.89)	(307)	(0.00)
10	8.24	32.15	25.03	10	8.24	32.15	25.03	294	0.03
20	7.82	32.26	25.17	20	7.82	32.26	25.17	280	0.06
30	7.67	32.28	25.21	30	7.67	32.28	25.21	277	0.09
40	7.39	32.36	25.31	50	7.28	32.45	25.40	259	0.14
50	7.28	32.45	25.40	75	5.99	32.57	25.66	234	0.20
75	5.99	32.57	25.66	100	6.30	33.05	26.00	202	0.26
100	6.30	33.05	26.00	150	6.30	33.76	26.56	148	0.34
150	6.30	33.76	26.56	200	6.18	33.91	26.69	136	0.42
200	6.18	33.91	26.69	250	6.09	33.92	26.71	134	0.49
300	5.93	33.94	26.75	300	5.93	33.94	26.75	130	0.56
400	5.37	34.03	26.89	400	5.37	34.03	26.89	117	0.68
500	4.99	34.08	26.97	500	4.99	34.08	26.97	110	0.80

D2

HMCS CEDARWOOD; May 13, 1951; 1200 GCT; 51°12'N, 130°02'W; sounding, 640 m; wind, 300°, force 3; weather, cloudy; sea, slight.

2	8.29	31.96	24.87	0	(8.29)	(31.96)	(24.87)	(309)	(0.00)
10	8.26	31.98	24.89	10	8.26	31.98	24.89	307	0.03
20	8.12	31.96	24.89	20	8.12	31.96	24.89	307	0.06
30	7.11	32.12	25.16	30	7.11	32.12	25.16	281	0.09
40	7.11	32.17	25.20	50	6.92	32.19	25.24	274	0.15
50	6.92	32.19	25.24	75	6.20	32.48	25.56	243	0.21
75	6.20	32.48	25.56	100	6.31	33.00	25.96	205	0.27
100	6.31	33.00	25.96	150	6.37	33.72	26.52	152	0.36
150	6.37	33.72	26.52	200	6.23	33.86	26.65	140	0.43
200	6.23	33.86	26.65	250	5.93	33.93	26.74	131	0.50
300	5.68	33.98	26.81	300	5.68	33.98	26.81	125	0.57
400	5.34	34.02	26.88	400	5.34	34.02	26.88	118	0.69
500	-	34.06	-	500		34.06			

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 13, 1951; 1700 GCT; 51°39'N, 130°47'W; sounding, missing; wind, 320°, force 3; weather, cloudy; sea, slight. D3

2	7.71	32.07	25.04	0	(7.71)	(32.07)	(25.04)	(293)	(0.00)
10	7.67	32.09	25.06	10	7.67	32.09	25.06	291	0.03
20	7.15	32.17	25.20	20	7.15	32.17	25.20	278	0.06
30	6.77	32.33	25.37	30	6.77	32.33	25.37	262	0.08
40	6.70	32.41	25.44	50	6.51	32.52	25.55	244	0.14
50	6.51	32.52	25.55	75	6.44	32.79	25.78	222	0.19
75	6.44	32.79	25.78	100	6.42	32.92	25.88	213	0.25
100	6.42	32.92	25.88	150	6.54	33.17	26.06	196	0.35
150	-	33.17	-	200	6.55	33.72	26.49	155	0.44
200	6.55	33.72	26.49	250	6.39	33.81	26.59	146	0.52
300	6.21	33.89	26.67	300	6.21	33.89	26.67	138	0.59
400	5.77	34.00	26.81	400	5.77	34.00	26.81	125	0.72
500	5.16	34.03	26.91	500	5.16	34.03	26.91	115	0.85

HMCS CEDARWOOD; May 13, 1951; 2300 GCT; 52°16'N, 131°32'W; sounding, 549 m; wind, 200°, force 1; weather, overcast; sea, slight. E1

2	7.93	32.24	25.14	0	(7.93)	(32.24)	(25.14)	(283)	(0.00)
10	7.48	32.26	25.22	10	7.48	32.26	25.22	276	0.03
20	7.22	32.26	25.26	20	7.22	32.26	25.26	272	0.06
30	6.96	32.31	25.33	30	6.96	32.31	25.33	265	0.08
40	6.87	32.36	25.38	50	6.69	32.41	25.44	255	0.13
50	6.69	32.41	25.44	75	6.46	32.55	25.58	242	0.20
75	6.46	32.55	25.58	100	6.42	32.95	25.90	211	0.25
100	6.42	32.95	25.90	150	6.48	33.79	26.56	148	0.34
150	6.48	33.79	26.56	200	6.16	33.94	26.72	133	0.42
200	6.16	33.94	26.72	250	5.82	33.96	26.78	128	0.48
300	5.46	33.98	26.84	300	5.46	33.98	26.84	122	0.55

HMCS CEDARWOOD; May 14, 1951; 0600 GCT; 52°18'N, 132°55'W; sounding, missing; wind, 140°, force 5; weather, overcast; sea, slight. E2

2	8.29	32.19	25.05	0	(8.29)	(32.19)	(25.05)	(292)	(0.00)
10	8.26	32.19	25.05	10	8.26	32.19	25.05	292	0.03
20	8.25	32.19	25.06	20	8.25	32.19	25.06	291	0.06
30	7.71	32.19	25.13	30	7.71	32.19	25.13	284	0.09
40	7.17	32.24	25.25	50	7.08	32.28	25.29	269	0.14
50	7.08	32.28	25.29	75	6.08	32.43	25.54	245	0.21
75	6.08	32.43	25.54	100	6.53	32.79	25.76	224	0.27
100	6.53	32.79	25.76	150	6.49	33.52	26.34	169	0.36
150	6.49	33.52	26.34	200	6.44	33.98	26.71	134	0.44
200	6.44	33.98	26.71	250	5.95	34.01	26.80	126	0.51
300	5.49	34.03	26.87	300	5.49	34.03	26.87	119	0.57
400	4.68	-	-	400	4.68	34.04	26.97	110	0.69
500	4.33	34.05	27.02	500	4.33	34.05	27.02	105	0.80
700	3.95	34.22	27.19	600	4.14	34.14	27.11	96	0.91
900	3.59	34.32	27.31	800	3.77	34.28	27.26	82	1.10

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
E3	HMCS CEDARWOOD; May 14, 1951; 1800 GCT; 52°23'N, 134°25'W; sounding, missing; wind, missing; weather, fog; sea, slight.								
2	7.79	32.15	25.09	0	(7.79)	(32.15)	(25.09)	(288)	(0.00)
10	7.74	32.15	25.10	10	7.74	32.15	25.10	287	0.03
20	7.73	32.14	25.09	20	7.73	32.14	25.09	288	0.06
30	7.65	32.15	25.11	30	7.65	32.15	25.11	286	0.09
40	6.41	32.31	25.40	50	6.49	32.58	25.60	240	0.14
50	6.49	32.58	25.60	75	5.43	32.65	25.79	222	0.20
75	5.43	32.65	25.79	100	5.70	32.83	25.90	211	0.25
100	5.70	32.83	25.90	150	5.92	33.77	26.61	144	0.34
150	5.92	33.77	26.61	200	5.56	33.88	26.74	131	0.41
200	5.56	33.88	26.74	250	5.17	33.90	26.81	125	0.48
300	4.88	33.98u	26.90	300	4.88	33.94	26.87	189	0.54
362	4.67	33.99	26.93	400	4.45	34.03	26.99	108	0.66
400	4.45	34.03	26.99	500	4.10	34.13	27.11	96	0.76
500	4.10	34.13	27.11	600	3.94	34.21	27.19	89	0.86
700	3.75	34.27	27.25	800	3.54	34.32	27.31	77	1.04
900	3.31	34.36	27.37						
E4	HMCS CEDARWOOD; May 15, 1951; 0000 GCT; 52°20'N, 135°30'W; sounding, missing; wind, missing; weather, overcast; sea, calm.								
2	7.53	32.29	25.24	0	(7.53)	(32.29)	(25.24)	(274)	(0.00)
10	7.22	32.29	25.28	10	7.22	32.29	25.28	270	0.03
20	7.21	32.29	25.28	20	7.21	32.29	25.28	270	0.05
30	6.51	32.41	25.47	30	6.51	32.41	25.47	252	0.08
40	6.3	32.45	25.53	50	6.0	32.48	25.59	240	0.13
50	6.0	32.48	25.59	75	5.45	32.64	25.78	222	0.19
75	5.45	32.64	25.78	100	5.04	32.76	25.92	209	0.24
100	5.04	32.76	25.92	150	6.43	33.79	26.56	148	0.33
150	6.43	33.79	26.56	200	5.94	33.93	26.74	131	0.40
200	5.94	33.93	26.74	250	5.53	33.98	26.83	123	0.47
300	5.18	34.02	26.90	300	5.18	34.02	26.90	116	0.53
360	4.82	34.05	26.97	400	4.71	34.06	26.99	108	0.64
400	4.71	34.06	26.99	500	4.32	34.15	27.10	97	0.75
500	4.32	34.15	27.10	600	4.11	34.24	27.19	89	0.85
700	3.86	34.31	27.27	800	3.59	34.35	27.33	75	1.03
900	3.28	34.37	27.38						
E5	HMCS CEDARWOOD; May 15, 1951; 0600 GCT; 52°19'N, 136°37'W; sounding, missing; wind, 140°, force 1; weather, overcast; sea, calm.								
2	-	32.43	-	0		(32.43)			
10	7.27	32.43	25.38	10	7.27	32.43	25.38	260	
20	7.17	32.43	25.40	20	7.17	32.43	25.40	259	
30	6.97	32.43	25.42	30	6.97	32.43	25.42	257	
40	6.01	32.48	25.59	50	5.69	32.52	25.66	234	
50	5.69	32.52	25.66	75	5.40	32.64	25.78	222	
75	5.40	32.64	25.78	100	6.11	33.15	26.10	192	
100	6.11	33.15	26.10	150	6.42	33.72	26.51	153	
150	6.42	33.72	26.51	200	6.22	33.88	26.66	139	
200	6.22	33.88	26.66	250	5.88	33.92	26.74	131	
300	5.54	33.96	26.81	300	5.54	33.96	26.81	125	
363	5.12	34.02	26.91	400	4.90	34.02	26.93	113	
400	4.90	34.02	26.93	500	4.59	34.12	27.05	102	
500	4.59	34.12	27.05	600	4.31	34.19	27.13	94	
700	4.05	34.24	27.20	800	3.81	34.29	27.26	82	
900	3.59	34.32	27.31						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

E6

HMCS CEDARWOOD; May 15, 1951; 1200 GCT; 52°18'N, 137°46'W; sounding, missing; wind, missing; weather, fog; sea, calm.

2	7.54	32.41	25.33	0	(7.54)	(32.41)	(25.33)	(265)	(0.00)
10	7.27	32.41	25.37	10	7.27	32.41	25.37	262	0.03
20	7.26	32.41	25.37	20	7.26	32.41	25.37	262	0.05
30	7.26	32.40	25.36	30	7.26	32.40	25.36	262	0.08
40	7.06	32.38	25.37	50	6.18	32.46	25.55	244	0.13
50	6.18	32.46	25.55	75	5.40	32.60	25.75	225	0.19
75	5.40	32.60	25.75	100	5.24	32.71	25.86	215	0.24
100	5.24	32.71	25.86	150	5.81	33.72	26.59	146	0.34
150	5.81	33.72	26.59	200	5.49	33.89	26.76	129	0.40
200	5.49	33.89	26.76	250	5.05	33.97	26.88	118	0.47
300	4.75	34.02	26.95	300	4.75	34.02	26.95	111	0.53
361	4.57	-	-	400	4.56	34.06	27.00	107	0.64
400	4.56	34.06	27.00	500	4.28	34.15	27.10	97	0.74
500	4.28	34.15	27.10	600	4.04	34.23	27.19	89	0.84
700	3.80	34.29	27.26	800	3.57	34.35	27.33	75	1.02
900	3.35	34.39	27.39						

E7

HMCS CEDARWOOD; May 15, 1951; 1900 GCT; 52°18'N, 138°50'W; sounding, missing; wind, 220°, force 2; weather, fog; sea, calm.

2	7.46	32.58	25.47	0	(7.46)	(32.58)	(25.47)	(252)	(0.00)
10	6.65	32.58	25.58	10	6.65	32.58	25.58	242	0.02
20	6.57	32.58	25.59	20	6.57	32.58	25.59	240	0.05
30	6.42	32.58	25.61	30	6.42	32.58	25.61	239	0.07
40	5.76	32.58	25.69	50	5.13	32.58	25.77	223	0.12
50	5.13	32.58	25.77	75	4.68	32.62	25.85	216	0.17
75	4.68	32.62	25.85	100	4.66	32.67	25.89	212	0.23
100	4.66	32.67	25.89	150	4.54	33.60	26.64	141	0.32
150	4.54	33.60	26.64	200	4.48	33.76	26.77	128	0.38
200	4.48	33.76	26.77	250	4.30	33.86	26.87	119	0.45
300	4.15	33.94	26.95	300	4.15	33.94	26.95	111	0.51
363	4.00	-	-	400	4.02	34.03	27.04	103	0.62
400	4.02	34.03	27.04	500	3.81	34.12	27.13	94	0.72
500	3.81	34.12	27.13	600	3.63	34.22	27.23	85	0.81
700	3.45	34.29	27.30	800	3.28	34.34	27.35	74	0.98
900	3.12	34.37	27.39						

E8

HMCS CEDARWOOD; May 15, 1951; 2300 GCT; 52°18'N, 139°56'W; sounding, missing; wind, 180°, force 2; weather, overcast; sea, slight.

2	6.77	32.58	25.57	0	(6.77)	(32.58)	(25.57)	(242)	(0.00)
10	6.67	32.58	25.58	10	6.67	32.58	25.58	242	0.02
20	6.37	32.60	25.63	20	6.37	32.60	25.63	240	0.05
30	6.01	32.60	25.68	30	6.01	32.60	25.68	232	0.07
40	5.12	32.60	25.78	50	4.79	32.62	25.84	217	0.12
50	4.79	32.62	25.84	75	4.61	32.64	25.87	214	0.17
75	4.61	32.64	25.87	100	4.43	32.78	26.00	202	0.22
100	4.43	32.78	26.00	150	4.51	33.72	26.74	131	0.31
150	4.51	33.72	26.74	200	4.44	33.82	26.82	124	0.37
200	4.44	33.82	26.82	250	4.22	33.88	26.90	116	0.43
300	4.05	33.94	26.96	300	4.05	33.94	26.96	110	0.49
364	3.90	-	-	400	3.86	34.06	27.08	99	0.60
400	3.86	34.06	27.08	500	3.70	34.15	27.16	92	0.70
500	3.70	34.15	27.16	600	3.50	34.24	27.25	83	0.79
700	3.33	34.31	27.33	800	3.18	34.35	27.37	72	0.95
900	3.05	34.36	27.39						

POG

C-I

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

E9

HMCS CEDARWOOD; May 16, 1951; 0500 GCT; 52°18'N, 141°00'W; sounding, missing; wind, 220°, force 3; weather, fog; sea, slight.

2	6.71	32.58	25.58	0	(6.71)	(32.58)	(25.58)	(242)	(0.00)
10	6.65	32.60	25.60	10	6.65	32.60	25.60	240	0.02
20	6.56	32.60	25.61	20	6.56	32.60	25.61	239	0.05
30	6.39	32.60	25.63	30	6.39	32.60	25.63	237	0.07
40	6.24	32.58	25.64	50	5.13	32.62	25.80	221	0.12
50	5.13	32.62	25.80	75	4.6	32.62	25.86	215	0.17
75	4.6	32.62	25.86	100	4.44	32.65	25.90	211	0.23
100	4.44	32.65	25.90	150	4.10	33.64	26.72	133	0.31
150	4.10	33.64	26.72	200	4.12	33.81	26.85	121	0.38
200	4.12	33.81	26.85	250	3.97	33.89	26.93	113	0.44
300	3.89	33.96	26.99	300	3.89	33.96	26.99	108	0.49
360	3.89	-	-	400	3.84	34.06	27.08	99	0.60
400	3.84	34.06	27.08	500	3.68	34.17	27.18	90	0.70
500	3.68	34.17	27.18	600	3.58	34.25	27.25	83	0.79
700	3.45	34.31	27.31	800	3.29	34.35	27.36	73	0.95
900	3.10	34.37	27.40						

F1

HMCS CEDARWOOD; May 16, 1951; 1200 GCT; 52°58'N, 141°00'W; sounding, missing; wind, missing; weather, clear; sea, calm.

2	-	32.58	-	0		(32.58)		
10	6.65	32.60	25.60	10	6.65	32.60	25.60	240
20	6.29	32.60	25.65	20	6.29	32.60	25.65	235
30	6.26	32.60	25.65	30	6.26	32.60	25.65	235
40	5.85	32.58	25.68	50	5.05	32.65	25.83	218
50	5.05	32.65	25.83	75	4.6	32.62	25.86	215
75	4.6	32.62	25.86	100	4.49	32.64	25.88	213
100	4.49	32.64	25.88	150	4.68	33.62	26.64	141
150	4.68	33.62	26.64	200	4.48	33.79	26.80	126
200	4.48	33.79	26.80	250	4.35	33.86	26.87	119
300	4.20	33.93	26.94	300	4.20	33.93	26.94	112
373	3.96	-	-	400	3.97	34.05	27.06	101
400	3.97	34.05	27.06	500	3.80	34.13	27.14	93
500	3.80	34.13	27.14	600	3.67	34.21	27.21	87
700	3.51	34.27	27.28	800	3.31	34.32	27.34	74
900	3.08	34.36	27.39					

F2

HMCS CEDARWOOD; May 16, 1951; 1800 GCT; 53°39'N, 141°00'W; sounding, missing; wind, 180°, force 3; weather, cloudy; sea, slight.

2	6.26	32.62	25.66	0	(6.26)	(32.62)	(25.66)	(234)	(0.00)
10	6.21	32.65	25.69	10	6.21	32.65	25.69	231	0.02
20	5.81	32.65	25.74	20	5.81	32.65	25.74	226	0.05
30	5.75	32.65	25.75	30	5.75	32.65	25.75	225	0.07
40	5.45	32.65	25.79	50	4.83	32.67	25.87	214	0.11
50	4.83	32.67	25.87	75	4.02	32.67	25.96	205	0.16
75	4.02	32.67	25.96	100	4.95	33.20	26.28	175	0.21
100	4.95	33.20	26.28	150	5.52	33.79	26.68	137	0.29
150	5.52	33.79	26.68	200	5.37	33.88	26.77	128	0.36
200	5.37	33.88	26.77	250	4.89	33.91	26.85	121	0.42
300	4.52	33.94	26.91	300	4.52	33.94	26.91	115	0.48
373	4.19	34.00	26.99	400	4.21	34.06	27.04	103	0.60
400	4.21	34.06	27.04	500	4.04	34.13	27.11	96	0.70
500	4.04	34.13	27.11	600	3.81	34.19	27.18	90	0.80
700	3.58	34.25	27.25	800	3.35	34.30	27.32	76	0.97
900	3.11	-	-						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 16, 1951; 2300 GCT; 54°18'N, 140°39'W; sounding, missing; wind, 220°, force 3; weather, overcast; sea, slight. G1

2	6.25	32.60	25.65	0	(6.25)	(32.60)	(25.65)	(235)	(0.00)
10	6.37	32.62	25.65	10	6.37	32.62	25.65	235	0.02
20	5.98	32.62	25.70	20	5.98	32.62	25.70	230	0.05
30	5.90	32.62	25.71	30	5.90	32.62	25.71	229	0.07
40	5.34	32.62	25.78	50	4.50	32.65	25.89	212	0.11
50	4.50	32.65	25.89	75	4.02	32.69	25.97	204	0.17
75	4.02	32.69	25.97	100	4.31	32.69	25.94	207	0.22
100	4.31	32.69	25.94	150	6.08	33.69	26.53	141	0.31
150	6.08	33.69	26.53	200	5.82	33.88	26.71	134	0.38
200	5.82	33.88	26.71	250	5.23	33.91	26.81	125	0.45
300	4.84	33.93	26.87	300	4.84	33.93	26.87	119	0.51
372	4.65	33.96	26.91	400	4.51	34.02	26.98	109	0.63
400	4.51	34.02	26.98	500	4.31	34.06	27.03	104	0.74
500	4.31	34.06	27.03	600	4.06	34.16	27.13	94	0.84
700	3.85	34.22	27.20	800	3.67	34.23	27.23	85	1.03
900	3.53	34.24	27.25						

HMCS CEDARWOOD; May 18, 1951; 0600 GCT; 54°18'N, 139°34'W; sounding, missing; wind, 220°, force 3; weather, overcast; sea, slight. G2

2	6.7	32.62	25.61	0	(6.7)	(32.62)	(25.61)	(239)	(0.00)
10	6.55	32.62	25.63	10	6.55	32.62	25.63	237	0.02
20	6.12	32.58	25.65	20	6.12	32.58	25.65	235	0.05
30	5.73	32.58	25.70	30	5.73	32.58	25.70	230	0.07
40	4.81	32.62	25.83	50	4.23	32.67	25.93	208	0.12
50	4.23	32.67	25.93	75	3.93	32.74	26.02	200	0.17
75	3.93	32.74	26.02	100	4.01	32.88	26.12	190	0.21
100	4.01	32.88	26.12	150	4.79	33.65	26.65	140	0.30
150	4.79	33.65	26.65	200	4.65	33.79	26.78	128	0.36
200	4.65	33.79	26.78	250	4.45	33.87	26.86	120	0.43
300	4.31	33.94	26.93	300	4.31	33.94	26.93	113	0.49
373	-	34.03	-	400	4.24	34.08	27.05	102	0.60
400	4.24	34.08	27.05	500	3.91	34.12	27.12	95	0.70
500	3.91	34.12	27.12	600	3.69	34.18	27.19	89	0.80
700	3.49	34.25	27.26	800	3.32	34.32	27.33	75	0.97
900	3.17	34.39	27.40						

HMCS CEDARWOOD; May 18, 1951; 1200 GCT; 54°18'N, 138°30'W; sounding, missing; wind, 180°, force 4; weather, drizzle; sea, slight. G3

2	7.05	32.57	25.52	0	(7.05)	(32.57)	(25.52)	(247)	(0.00)
10	6.99	32.57	25.53	10	6.99	32.57	25.53	246	0.02
20	6.56	32.57	25.59	20	6.56	32.57	25.59	240	0.05
30	5.67	32.62	25.74	30	5.67	32.62	25.74	226	0.07
40	5.37	32.64	25.79	50	5.08	32.62	25.80	221	0.12
50	5.08	32.62	25.80	75	4.90	32.65	25.85	216	0.17
75	4.90	32.65	25.85	100	4.88	32.67	25.87	214	0.23
100	-	32.67	-	150	4.85	33.50	26.53	151	0.32
150	4.85	33.50	26.53	200	4.50	33.72	26.74	131	0.39
200	4.50	33.72	26.74	250	4.56	33.87	26.85	121	0.45
300	4.61	33.98	26.93	300	4.61	33.98	26.93	113	0.51
373	4.27	-	-	400	4.24	34.05	27.03	104	0.62
400	4.24	34.05	27.03	500	3.96	34.15	27.14	93	0.73
500	3.96	34.15	27.14	600	3.74	34.24	27.23	85	0.82
700	3.53	34.31	27.31	800	3.34	34.36	27.36	73	0.99
900	3.17	34.39	27.40						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

G4

HMCS CEDARWOOD; May 18, 1951; 1800 GCT; 54°17'N, 137°28'W; sounding, missing; wind, 180°, force 5; weather, overcast; sea, slight.

2	7.17	32.50	25.45	0	(7.17)	(32.50)	(25.45)	(254)	(0.00)
10	7.11	32.52	25.48	10	7.11	32.52	25.48	251	0.02
20	7.01	32.52	25.49	20	7.01	32.52	25.49	250	0.05
30	6.24	32.55	25.61	30	6.24	32.55	25.61	239	0.08
40	5.48	32.53	25.69	50	5.19	32.62	25.79	222	0.12
50	5.19	32.62	25.79	75	4.37	32.60	25.87	214	0.18
75	4.37	32.60	25.87	100	4.0	32.67	25.96	205	0.23
100	4.0	32.67	25.96	150	5.42	33.55	26.50	154	0.32
150	5.42	33.55	26.50	200	5.29	33.77	26.69	136	0.39
200	5.29	33.77	26.69	250	4.72	33.83	26.80	126	0.46
300	4.40	33.88	26.88	300	4.40	33.88	26.88	118	0.52
373	4.38	-	-	400	4.29	33.98	26.97	110	0.64
400	4.29	33.98	26.97	500	3.99	34.05	27.05	102	0.75
500	3.99	34.05	27.05	600	3.89	34.12	27.12	95	0.85
700	3.80	34.19	27.18	800	3.72	34.25	27.24	84	1.04
900	3.65	34.31	27.30						

G5

HMCS CEDARWOOD; May 18, 1951; 2300 GCT; 54°16'N, 136°21'W; sounding, missing; wind, 140°, force 5; weather, moderate to thick freezing drizzle; sea, rough.

2	7.84	32.38	25.26	0	(7.84)	(32.38)	(25.26)	(272)	(0.00)
10	7.83	32.36	25.25	10	7.83	32.36	25.25	273	0.03
20	7.08	32.38	25.37	20	7.08	32.38	25.37	262	0.05
30	6.93	32.34	25.36	30	6.93	32.34	25.36	262	0.08
40	6.15	32.45	25.54	50	5.71	32.44	25.59	240	0.13
50	5.71	32.44	25.59	75	5.42	32.50	25.67	233	0.19
75	5.42	32.50	25.67	100	4.61	32.64	25.87	214	0.25
100	4.61	32.64	25.87	150	6.35	33.55	26.39	164	0.34
150	6.35	33.55	26.39	200	6.08	33.84	26.65	140	0.42
200	6.08	33.84	26.65	250	5.58	33.89	26.75	130	0.49
300	5.24	33.93	26.82	300	5.24	33.93	26.82	124	0.55
373	5.01	-	-	400	4.89	34.00	26.92	114	0.68
400	4.89	34.00	26.92	500	4.53	34.06	27.01	106	0.79
500	4.53	34.06	27.01	600	4.19	34.17	27.13	94	0.90
700	3.89	34.25	27.22	800	3.64	34.30	27.29	79	1.08
900	3.44	34.32	27.32						

G6

HMCS CEDARWOOD; May 19, 1951; 0600 GCT; 54°16'N, 135°21'W; sounding, missing; wind, 140°, force 6; weather, rain; sea, rough.

2	7.85	32.28	25.18	0	(7.85)	(32.28)	(25.18)	(280)	(0.00)
10	7.82	32.26	25.17	10	7.82	32.26	25.17	280	0.03
20	7.04	32.43	25.41	20	7.04	32.43	25.41	258	0.06
30	6.69	32.46	25.48	30	6.69	32.46	25.48	251	0.08
40	6.52	32.48	25.52	50	6.12	32.50	25.59	240	0.13
50	6.12	32.50	25.59	75	5.07	32.64	25.82	219	0.19
75	5.07	32.64	25.82	100	5.4	32.81	25.92	209	0.24
100	5.4	32.81	25.92	150	6.06	33.62	26.48	156	0.33
150	6.06	33.62	26.48	200	5.93	33.81	26.64	141	0.41
200	5.93	33.81	26.64	250	5.78	33.91	26.74	131	0.48
300	5.53	33.98	26.83	300	5.53	33.98	26.83	123	0.54
373	4.99	-	-	400	4.98	34.05	26.95	110	0.66
400	4.98	34.05	26.95	500	4.52	34.08	27.02	105	0.78
500	4.52	34.08	27.02	600	4.26	34.17	27.12	95	0.88
700	4.01	34.24	27.20	800	3.76	34.29	27.27	81	1.07
900	3.51	34.32	27.32						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 19, 1951; 1200 GCT; 54°15'N, 134°24'W; sounding, missing; wind, 110°, force 7; weather, overcast; sea, rough. G7

2	7.53	32.38	25.31	0	(7.53)	(32.38)	(25.31)	(267)	(0.00)
10	7.49	32.40	25.33	10	7.49	32.40	25.33	265	0.03
20	7.15	32.40	25.38	20	7.15	32.40	25.38	260	0.05
30	6.90	32.41	25.42	30	6.90	32.41	25.42	257	0.08
40	6.28	32.50	25.57	50	5.92	32.50	25.61	239	0.13
50	5.92	32.50	25.61	75	5.20	32.62	25.79	222	0.19
75	5.20	32.62	25.79	100	4.72	32.69	25.90	211	0.24
100	4.72	32.69	25.90	150	5.87	33.55	26.45	159	0.33
150	5.87	33.55	26.45	200	5.78	33.88	26.72	133	0.41
200	5.78	33.88	26.72	250	5.55	33.92	26.78	128	0.48
300	5.31	33.96	26.84	300	5.31	33.96	26.84	122	0.54
400	4.81	34.03	26.95	400	4.81	34.03	26.95	111	0.66
500	4.37	34.06	27.02	500	4.37	34.06	27.02	105	0.77
700	3.96	34.20	27.18	600	4.17	34.13	27.10	97	0.88
900	3.54	34.31	27.31	800	3.75	34.26	27.25	83	1.07

HMCS CEDARWOOD; May 19, 1951; 1700 GCT; 54°16'N, 133°17'W; sounding, 437 m; wind, 140°, force 2; weather, overcast; sea, slight. G8

2	8.12	32.17	25.06	0	(8.12)	(32.17)	(25.06)	(291)	(0.00)
10	8.17	32.19	25.07	10	8.17	32.19	25.07	290	0.03
20	7.35	32.21	25.20	20	7.35	32.21	25.20	278	0.06
30	6.99	32.28	25.30	30	6.99	32.28	25.30	268	0.08
40	6.73	32.31	25.36	50	6.26	32.41	25.50	249	0.14
50	6.26	32.41	25.50	75	5.98	32.58	25.67	233	0.20
75	5.98	32.58	25.67	100	6.03	32.64	25.71	229	0.26
100	6.03	32.64	25.71	150	6.01	33.45	26.35	168	0.36
150	6.01	33.45	26.35	200	5.96	33.82	26.65	140	0.43
200	5.96	33.82	26.65	300	5.59	33.94	26.79	127	0.57
300	5.59	33.94	26.79	400	5.26	34.02	26.89	117	0.70
400	5.26	34.02	26.89						

HMCS CEDARWOOD; May 19, 1951; 1900 GCT; 54°16'N, 132°51'W; sounding, 329 m; wind, 140°, force 2; weather, cloudy; sea, slight. DIXI

2	7.65	31.53	24.62	0	(7.65)	(31.53)	(24.62)	(333)	(0.00)
10	6.24	31.67	24.92	10	6.24	31.67	24.92	304	0.03
20	6.02	31.78	25.03	20	6.02	31.78	25.03	294	0.06
30	-	32.02	-	30	5.92	32.02	25.23	275	0.09
40	5.88	32.05	25.26	50	5.89	32.07	25.28	270	0.14
50	5.89	32.07	25.28	75	5.80	32.55	25.67	233	0.21
75	5.80	32.55	25.67	100	5.66	32.88	25.94	207	0.26
100	5.66	32.88	25.94	150	5.58	33.57	26.50	154	0.35
150	5.58	33.57	26.50	200	5.53	33.74	26.64	141	0.43
200	5.53	33.74	26.64	250	5.45	33.85	26.73	132	0.50
300	5.35	33.89	26.78	300	5.35	33.89	26.78	128	0.56

HMCS CEDARWOOD; May 19, 1951; 2100 GCT; 54°25'N, 132°37'W; sounding, 292 m; wind, 140°, force 3; weather, cloudy; sea, slight. DIX2

2	8.15	31.40	24.45	0	(8.15)	(31.40)	(24.45)	(349)	(0.00)
10	7.14	31.45	24.63	10	7.14	31.45	24.63	332	0.03
20	6.51	31.53	24.78	20	6.51	31.53	24.78	318	0.07
30	6.22	31.72	24.96	30	6.22	31.72	24.96	300	0.10
40	6.04	31.86	25.09	50	5.83	32.07	25.28	270	0.16
50	5.83	32.07	25.28	75	5.81	32.31	25.48	251	0.22
75	5.81	32.31	25.48	100	5.63	32.67	25.78	222	0.28
100	5.63	32.67	25.78	150	5.62	33.22	26.22	181	0.38
150	5.62	33.22	26.22	200	5.57	33.58	26.51	153	0.46
200	5.57	33.58	26.51	250	5.46	33.79	26.69	136	0.54
250	5.46	33.79	26.69						

POG

C-I

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

DIX3

HMCS CEDARWOOD; May 19, 1951; 2300 GCT; 54°35'N, 132°23'W; sounding, 219 m; wind, 140°, force 1; weather, overcast; sea, slight.

2	7.94	31.26	24.37	0	(7.94)	(31.26)	(24.37)	(357)	(0.00)
10	7.67	31.26	24.41	10	7.67	31.26	24.41	353	0.04
20	7.00	31.41	24.62	20	7.00	31.41	24.62	333	0.07
30	6.67	31.53	24.76	30	6.67	31.53	24.76	320	0.10
40	6.53	31.60	24.83	50	6.21	31.76	24.99	298	0.16
50	6.21	31.76	24.99	75	5.73	32.48	25.62	238	0.23
75	5.73	32.48	25.62	100	5.64	32.81	25.89	212	0.29
100	5.64	32.81	25.89	150	5.61	33.27	26.26	177	0.39
150	5.61	33.27	26.26						

DIX4

HMCS CEDARWOOD; May 20, 1951; 0200 GCT; 54°54'N, 132°01'W; sounding, missing; wind, 180°, force 1; weather, cloudy; sea, slight.

2	7.44	31.40	24.55	0	(7.44)	(31.40)	(24.55)	(340)	(0.00)
10	7.07	31.43	24.62	10	7.07	31.43	24.62	333	0.03
20	6.41	31.78	24.98	20	6.41	31.78	24.98	298	0.06
30	6.46	31.91	25.08	30	6.46	31.91	25.08	289	0.10
40	6.14	32.00	25.19	50	6.07	32.14	25.31	267	0.15
50	6.07	32.14	25.31	75	5.84	32.43	25.57	242	0.21
75	5.84	32.43	25.57	100	5.64	32.81	25.89	212	0.27
100	5.64	32.81	25.89	150	5.64	33.41	26.36	167	0.37
150	5.64	33.41	26.36	200	5.63	33.57	26.49	155	0.45
200	5.63	33.57	26.49	250	5.61	33.66	26.56	148	0.52
300	5.57	33.67	26.58	300	5.57	33.67	26.58	146	0.60

DIX5

HMCS CEDARWOOD; May 20, 1951; 0300 GCT; 54°27'N, 131°47'W; sounding, 307 m; wind, 140°, force 2; weather, cloudy; sea, slight.

2	7.61	31.81	24.85	0	(7.61)	(31.81)	(24.85)	(311)	(0.00)
10	7.10	31.84	24.94	10	7.10	31.84	24.94	302	0.03
20	6.01	32.05	25.25	20	6.01	32.05	25.25	273	0.06
30	5.75	32.19	25.39	30	5.75	32.19	25.39	260	0.09
40	5.67	32.24	25.44	50	5.57	32.41	25.58	242	0.14
50	5.57	32.41	25.58	75	5.60	32.64	25.76	224	0.20
75	5.60	32.64	25.76	100	5.59	32.86	25.94	207	0.25
100	5.59	32.86	25.94	150	5.64	33.40	26.36	167	0.34
150	5.64	33.40	26.36	200	5.64	33.57	26.49	155	0.42
200	5.64	33.57	26.49	250	5.62	33.65	26.56	148	0.50
250	5.62	33.65	26.56						

DIX6

HMCS CEDARWOOD; May 20, 1951; 0500 GCT; 54°19'N, 131°34'W; sounding, 217 m; wind, 160°, force 2; weather, cloudy; sea, slight.

2	8.62	31.50	24.46	0	(8.62)	(31.50)	(24.46)	(348)	(0.00)
10	8.30	31.65	24.63	10	8.30	31.65	24.63	332	0.03
20	6.55	31.88	25.05	20	6.55	31.88	25.05	292	0.06
30	6.02	32.10	25.28	30	6.02	32.10	25.28	270	0.09
40	5.84	32.29	25.46	50	5.79	32.34	25.50	249	0.14
50	5.79	32.34	25.50	75	5.58	32.58	25.72	228	0.20
75	5.58	32.58	25.72	100	5.55	33.03	26.07	195	0.26
100	5.55	33.03	26.07	150	5.61	33.43	26.38	166	0.35
150	5.61	33.43	26.38						

HQI

HMCS CEDARWOOD; May 22, 1951; 0300 GCT; 54°08'N, 131°03'W; sounding, 102 m; wind, 220°, force 2; weather, overcast; sea, slight.

1	8.40	31.72	24.67	0	(8.40)	(31.72)	(24.67)	(328)	(0.00)
5	8.40	31.72	24.67	10	8.36	31.72	24.67	328	0.03
10	8.36	31.72	24.67	20	8.33	31.74	24.69	326	0.07
15	8.31	31.72	24.68	30	8.01	31.76	24.75	320	0.10
20	8.33	31.74	24.69	50	7.44	31.83	24.89	307	0.16
30	8.01	31.76	24.75	75	6.94	32.05	25.13	284	0.24
40	7.84	31.79	24.80						
50	7.44	31.83	24.89						
75	6.94	32.05	25.13						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 22, 1951; 0600 GCT; 53°49'N, 131°17'W; sounding, 40 m; wind, 210°, force 2; weather, overcast; sea, calm. HQ2

1	8.72	31.81	24.69	0	(8.72)	(31.81)	(24.69)	(326)	(0.00)
5	8.77	31.81	24.68	10	8.11	31.81	24.78	318	0.03
10	8.11	31.81	24.78	20	7.51	31.79	24.85	311	0.06
15	7.66	31.81	24.84	30	7.35	31.79	24.87	309	0.10
20	7.51	31.79	24.85						
30	7.35	31.79	24.87						

HMCS CEDARWOOD; May 22, 1951; 0800 GCT; 53°29'N, 131°30'W; sounding, 27 m; wind, missing; weather, cloudy; sea, missing. HQ3

1	8.58	31.84	24.73	0	(8.58)	(31.84)	(24.73)	(322)	(0.00)
5	8.62	31.86	24.74	10	8.67	31.86	24.74	321	0.03
10	8.67	31.86	24.74	20	8.60	31.90	24.78	318	0.06
15	8.60	31.86	24.75						
20	8.60	31.90	24.78						
25	8.60	31.88	24.76						

HMCS CEDARWOOD; May 22, 1951; 1000 GCT; 53°29'N, 131°16'W; sounding, 31 m; wind, missing; weather, cloudy; sea, missing. HQ4

1	7.49	31.83	24.88	0	(7.49)	(31.83)	(24.88)	(308)	(0.00)
5	7.48	31.84	24.89	10	7.50	31.84	24.89	307	0.03
10	7.50	31.84	24.89	20	7.50	31.83	24.88	308	0.06
15	7.56	31.84	24.88						
20	7.50	31.83	24.88						
25	7.49	31.84	24.89						

HMCS CEDARWOOD; May 22, 1951; 1100 GCT; 53°29'N, 131°02'W; sounding, 65 m; wind, missing; weather, cloudy; sea, missing. HQ5

1	8.04	31.69	24.70	0	(8.04)	(31.69)	(24.70)	(325)	(0.00)
5	8.02	31.67	24.68	10	8.02	31.74	24.74	321	0.03
10	8.02	31.74	24.74	20	7.67	31.76	24.80	316	0.06
15	7.98	31.74	24.74	30	6.46	31.84	25.03	294	0.10
20	7.67	31.76	24.80	50	6.22	32.00	25.18	280	0.15
30	6.46	31.84	25.03						
40	6.27	31.90	25.10						
50	6.22	32.00	25.18						

HMCS CEDARWOOD; May 22, 1951; 1200 GCT; 53°28'N, 130°48'W; sounding, 120 m; wind, missing; weather, cloudy; sea, missing. HQ6

1	8.62	31.69	24.61	0	(8.62)	(31.69)	(24.61)	(334)	(0.00)
10	8.54	31.71	24.64	10	8.54	31.71	24.64	331	0.03
20	8.40	31.71	24.66	20	8.40	31.71	24.66	329	0.07
30	7.78	31.76	24.79	30	7.78	31.76	24.79	317	0.10
40	7.45	31.83	24.89	50	6.84	31.88	25.01	296	0.16
50	6.84	31.88	25.01	75	6.23	32.12	25.27	271	0.23
75	6.23	32.12	25.27	100	6.15	32.60	25.66	234	0.29
100	6.15	32.60	25.66						

HMCS CEDARWOOD; May 22, 1951; 1500 GCT; 53°09'N, 130°18'W; sounding, 201 m; wind, 180°, force 1; weather, overcast; sea, missing. HQ7

1	9.19	31.67	24.51	0	(9.19)	(31.67)	(24.51)	(343)	(0.00)
5	9.14	31.67	24.52	10	9.14	31.67	24.52	342	0.03
10	9.14	31.67	24.52	20	8.93	31.72	24.59	336	0.07
15	8.97	31.72	24.58	30	7.72	31.81	24.83	313	0.10
20	8.93	31.72	24.59	50	7.03	31.95	25.04	293	0.16
30	7.72	31.81	24.83	75	6.80	32.10	25.19	279	0.23
40	7.30	31.90	24.96	100	6.37	32.64	25.67	233	0.30
50	7.03	31.95	25.04	150	5.94	33.57	26.45	254	0.40
75	6.80	32.10	25.19						
100	6.37	32.64	25.67						
150	5.94	33.57	26.45						

POG

C–1

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HQ8 HMCS CEDARWOOD; May 22, 1951; 1700 GCT; 52°58'N, 130°36'W; sounding, 87 m; wind, 180°, force 2; weather, overcast; sea, slight.

1	8.69	31.67	24.58	0	(8.69)	(31.67)	(24.58)	(337)	(0.00)
5	8.68	31.67	24.59	10	7.85	31.78	24.79	317	0.03
10	7.85	31.78	24.79	20	6.65	31.95	25.09	288	0.06
15	7.59	31.79	24.84	30	6.51	32.03	25.17	280	0.09
20	6.65	31.95	25.09	50	6.24	32.31	25.42	257	0.14
30	6.51	32.03	25.17	75	6.02	32.65	25.72	228	0.21
40	6.47	32.10	25.23						
50	6.24	32.31	25.42						
75	6.02	32.65	25.72						

HQ9 HMCS CEDARWOOD; May 22, 1951; 1900 GCT; 52°48'N, 130°55'W; sounding, 45 m; wind, 220°, force 1; weather, overcast; sea, slight.

1	8.54	31.74	24.66	0	(8.54)	(31.74)	(24.66)	(329)	(0.00)
5	8.50	31.76	24.68	10	8.42	31.76	24.69	326	0.03
10	8.42	31.76	24.69	20	7.65	31.81	24.84	312	0.06
15	7.91	31.81	24.81	30	7.54	31.81	24.86	310	0.10
20	7.65	31.81	24.84						
30	7.54	31.81	24.86						
40	7.53	31.81	24.86						

HQ10 HMCS CEDARWOOD; May 22, 1951; 2100 GCT; 52°37'N, 131°14'W; sounding, 118 m; wind, 140°, force 3; weather, cloudy; sea, slight.

1	8.60	31.79	24.69	0	(8.60)	(31.79)	(24.69)	(326)	(0.00)
5	8.26	31.83	24.77	10	8.17	31.81	24.77	319	0.03
10	8.17	31.81	24.77	20	8.07	31.81	24.78	318	0.06
15	8.15	31.81	24.77	30	7.96	31.83	24.82	314	0.10
20	8.07	31.81	24.78	50	6.69	32.05	25.16	281	0.16
30	7.96	31.83	24.82	75	6.30	32.40	25.49	250	0.22
40	7.79	31.83	24.84	100	6.26	32.55	25.61	239	0.28
50	6.69	32.05	25.16						
75	6.30	32.40	25.49						
100	6.26	32.55	25.61						

HQ11 HMCS CEDARWOOD; May 23, 1951; 0200 GCT; 52°05'N, 130°50'W; sounding, 217 m; wind, 180°, force 1; weather, overcast; sea, missing.

1	8.56	31.76	24.67	0	(8.56)	(31.76)	(24.67)	(328)	(0.00)
10	8.05	31.76	24.75	10	8.05	31.76	24.75	320	0.03
20	7.35	31.84	24.91	20	7.35	31.84	24.91	305	0.06
30	6.58	32.09	25.21	30	6.58	32.09	25.21	277	0.09
40	6.49	32.22	25.32	50	6.47	32.31	25.39	260	0.15
50	6.47	32.31	25.39	75	6.34	32.43	25.50	249	0.21
75	6.34	32.43	25.50	100	6.24	32.91	25.90	211	0.27
100	6.24	32.91	25.90	150	6.08	33.62	26.47	157	0.36
150	6.08	33.62	26.47						

HQ12 HMCS CEDARWOOD; May 23, 1951; 0500 GCT; 52°05'N, 130°08'W; sounding, 137 m; wind, missing; weather, drizzle; sea, missing.

1	9.41	31.59	24.41	0	(9.41)	(31.59)	(24.41)	(353)	(0.00)
10	8.76	31.64	24.55	10	8.76	31.64	24.55	340	0.04
20	8.42	31.71	24.66	20	8.42	31.71	24.66	329	0.07
30	8.06	31.72	24.72	30	8.06	31.72	24.72	323	0.10
40	7.72	31.83	24.85	50	7.12	31.90	24.99	298	0.16
50	7.12	31.90	24.99	75	6.40	32.41	25.48	251	0.23
75	6.40	32.41	25.48	100	6.23	33.29	26.20	183	0.29
100	6.23	33.29	26.20						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; May 23, 1951; 0800 GCT; 52°03'N, 129°26'W; sounding, 182 m; wind, 320°, force 1; weather, rain; sea, slight. HQ13

1	9.95	31.53	24.28	0	(9.95)	(31.53)	(24.28)	(365)	(0.00)
10	9.63	31.60	24.38	10	9.63	31.60	24.38	356	0.04
20	8.09	31.76	24.74	20	8.09	31.76	24.74	321	0.07
30	6.94	31.84	24.96	30	6.94	31.84	24.96	300	0.10
40	6.56	32.02	25.15	50	6.41	32.19	25.31	267	0.16
50	6.41	32.19	25.31	75	6.34	32.55	25.60	240	0.22
75	6.34	32.55	25.60	100	6.26	33.17	26.10	192	0.28
100	6.26	33.17	26.10						

HMCS CEDARWOOD; May 23, 1951; 1100 GCT; 52°02'N, 128°43'W; sounding, 171 m; wind, 290°, force 4; weather, rain; sea, slight. HQ14

1	10.01	31.50	24.24	0	(10.01)	(31.50)	(24.24)	(369)	(0.00)
10	9.94	31.50	24.26	10	9.94	31.50	24.26	367	0.04
20	9.70	31.59	24.36	20	9.70	31.59	24.36	358	0.07
30	8.23	31.72	24.69	30	8.23	31.72	24.69	326	0.11
40	6.95	31.83	24.95	50	6.89	31.84	24.97	300	0.17
50	6.89	31.84	24.97	75	6.37	32.21	25.33	265	0.24
75	6.37	32.21	25.33	100	6.34	32.88	25.86	215	0.30
100	6.34	32.88	25.86	150	6.11	33.57	26.43	161	0.40
150	6.11	33.57	26.43						

HMCS CEDARWOOD; May 23, 1951; 1300 GCT; 51°46'N, 128°34'W; sounding, 133 m; wind, 320°, force 3; weather, rain; sea, slight. HQ15

1	9.60	31.55	24.35	0	(9.60)	(31.55)	(24.35)	(359)	(0.00)
10	9.59	31.55	24.35	10	9.59	31.55	24.35	359	0.04
20	9.16	31.65	24.50	20	9.16	31.65	24.50	344	0.07
30	9.04	31.65	24.52	30	9.04	31.65	24.52	342	0.10
40	7.66	31.83	24.86	50	7.12	31.90	24.99	298	0.17
50	7.12	31.90	24.99	75	6.86	32.05	25.14	283	0.24
75	6.86	32.05	25.14	100	6.42	32.65	25.67	233	0.31
100	6.42	32.65	25.67						

HMCS CEDARWOOD; May 23, 1951; 1500 GCT; 51°35'N, 128°53'W; sounding, 38 m; wind, 270°, force 4; weather, overcast; sea, moderate. HQ16

1	9.34	31.64	24.46	0	(9.34)	(31.64)	(24.46)	(348)	(0.00)
5	9.29	31.64	24.47	10	8.67	31.74	24.64	331	0.03
10	8.67	31.74	24.64	20	8.01	31.81	24.79	317	0.07
15	8.22	31.79	24.75	30	7.95	31.84	24.83	313	0.10
20	8.01	31.81	24.79						
30	7.95	31.84	24.83						

HMCS CEDARWOOD; May 23, 1951; 1700 GCT; 51°23'N, 129°12'W; sounding, 43 m; wind, 220°, force 4; weather, overcast; sea, slight. HQ17

2	8.25	31.76	24.72	0	(8.25)	(31.76)	(24.72)	(323)	(0.00)
6	8.26	31.76	24.72	10	8.25	31.78	24.74	321	0.03
12	8.25	31.78	24.74	20	8.25	31.78	24.74	321	0.06
16	8.25	31.78	24.74	30	8.19	31.78	24.74	321	0.10
22	8.25	31.78	24.74						
32	8.17	-	-						

HMCS CEDARWOOD; May 23, 1951; 1900 GCT; 51°13'N, 129°23'W; sounding, 201 m; wind, 220°, force 3; weather, overcast; sea, slight. HQ18

2	9.40	31.81	24.58	0	(9.40)	(31.81)	(24.58)	(337)	(0.00)
10	9.34	31.81	24.59	10	9.34	31.81	24.59	336	0.03
20	9.05	31.86	24.68	20	9.05	31.86	24.68	327	0.07
30	7.61	32.02	25.01	30	7.61	32.02	25.01	296	0.10
40	6.76	32.15	25.23	50	6.46	32.38	25.45	254	0.15
50	6.46	32.38	25.45	75	6.29	32.79	25.79	222	0.21
75	6.29	32.79	25.79	100	6.36	33.55	26.38	166	0.26
100	6.36	33.55	26.38	150	6.09	33.86	26.66	139	0.34
150	6.09	33.86	26.66						

POG

C-I

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
HQ19	HMCS CEDARWOOD; May 23, 1951; 2200 GCT; 51°07'N, 128°55'W; sounding, 128 m; wind, 220°, force 4; weather, rain; sea, slight.								
2	9.70	31.60	24.37	0	(9.70)	(31.60)	(24.37)	(357)	(0.00)
10	9.59	31.72	24.48	10	9.59	31.72	24.48	346	0.04
20	9.04	31.90	24.71	20	9.04	31.90	24.71	324	0.07
30	8.43	31.98	24.87	30	8.43	31.98	24.87	309	0.10
40	7.87	32.10	25.04	50	7.62	32.21	25.16	281	0.16
50	7.62	32.21	25.16	75	7.14	32.28	25.28	275	0.23
75	7.14	32.28	25.28	100	7.03	32.43	25.42	257	0.30
100	7.03	32.43	25.42						
HQ20	HMCS CEDARWOOD; May 23, 1951; 2300 GCT; 51°07'N, 128°34'W; sounding, 170 m; wind, 220°, force 5; weather, rain; sea, slight.								
2	9.72	31.52	24.31	0	(9.72)	(31.52)	(24.31)	(362)	(0.00)
11	9.65	31.52	24.32	10	9.66	31.52	24.32	361	0.03
21	7.80	31.74	24.77	20	7.91	31.73	24.74	321	0.07
31	7.62	31.78	24.82	30	7.65	31.77	24.81	315	0.10
41	7.17	31.88	24.96	50	7.01	32.01	25.09	288	0.16
51	7.00	32.03	25.11	75	6.78	32.41	25.43	256	0.23
76	6.77	32.43	25.45	100	6.45	32.78	25.77	223	0.29
101	6.44	32.79	25.78	150	6.37	33.55	26.38	166	0.39
151	6.37	33.57	26.40						
HQ21	HMCS CEDARWOOD; May 24, 1951; 0200 GCT; 51°02'N, 128°12'W; sounding, 155 m; wind, 140°, force 4; weather, overcast; sea, slight.								
1	9.41	31.43	24.29	0	(9.41)	(31.43)	(24.29)	(364)	(0.00)
10	9.31	31.50	24.36	10	9.31	31.50	24.36	358	0.04
20	8.16	31.83	24.79	20	8.16	31.83	24.79	317	0.07
30	7.82	32.03	24.99	30	7.82	32.03	24.99	298	0.10
40	7.54	32.14	25.12	50	7.40	32.21	25.19	279	0.16
50	7.40	32.21	25.19	75	6.66	32.57	25.57	242	0.22
75	6.66	32.57	25.57	100	6.40	33.19	26.10	192	0.28
100	6.40	33.19	26.10	150	6.13	33.74	26.56	148	0.36
150	6.13	33.74	26.56						
HQ22	HMCS CEDARWOOD; May 24, 1951; 0500 GCT; 51°03'N, 127°51'W; sounding, 135 m; wind, 140°, force 5; weather, overcast; sea, slight.								
2	8.11	31.91	24.86	0	(8.11)	(31.91)	(24.86)	(310)	(0.00)
10	8.08	31.91	24.86	10	8.08	31.91	24.86	310	0.03
20	8.07	31.95	24.89	20	8.07	31.95	24.89	307	0.06
30	8.08	31.96	24.90	30	8.08	31.96	24.90	306	0.09
40	8.08	31.96	24.90	50	8.00	32.07	25.00	297	0.15
50	8.00	32.07	25.00	75	7.45	32.29	25.25	273	0.22
75	7.45	32.29	25.25	100	7.31	33.40	26.14	188	0.28
100	7.31	33.40	26.14						
HQ23	HMCS CEDARWOOD; May 24, 1951; 0700 GCT; 50°46'N, 127°17'W; sounding, 237 m; wind, 140°, force 4; weather, overcast; sea, slight.								
2	9.30	31.14	24.08	0	(9.30)	(31.14)	(24.08)	(384)	(0.00)
10	9.34	31.17	24.09	10	9.34	31.17	24.09	383	0.04
20	8.00	31.50	24.55	20	8.00	31.50	24.55	340	0.08
30	7.38	31.76	24.84	30	7.38	31.76	24.84	312	0.11
40	7.33	31.84	24.91	50	7.24	31.84	24.92	304	0.17
50	7.24	31.84	24.92	75	7.21	32.12	25.15	282	0.24
75	7.21	32.12	25.15	100	7.34	32.34	25.30	268	0.31
100	7.34	32.34	25.30	150	6.87	32.78	25.71	229	0.44
150	6.87	32.78	25.71						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S1

HMCS CEDARWOOD; July 18, 1951; 0900 GCT; 48°28'N, 124°44'W; sounding, 237 m; wind, calm; weather, fog; sea, calm.

2	12.86	31.36	23.63	0	(12.86)	(31.36)	(23.63)	(427)	(0.00)
10	10.38	31.88	24.48	10	10.38	31.88	24.48	346	0.04
20	9.73	32.38	24.97	20	9.73	32.38	24.97	300	0.07
30	9.38	32.79	25.35	30	9.38	32.79	25.35	263	0.10
40	7.81	33.40	26.07	50	7.76	33.40	26.07	195	0.14
50	7.76	33.40	26.07	75	7.37	33.62	26.30	173	0.19
75	7.37	33.62	26.30	100	6.93	33.77	26.48	156	0.23
100	6.93	33.77	26.48	150	6.73	33.86	26.58	146	0.31
125	6.85	33.82	26.53	200	6.62	33.89	26.62	143	0.38
150	6.73	33.86	26.58						
200	6.62	33.89	26.62						

S2

HMCS CEDARWOOD; July 18, 1951; 1200 GCT; 48°22'N, 125°10'W; sounding, 164 m; wind, calm; weather, cloudy; sea, calm.

2	13.94	32.12	24.00	0	(13.94)	(32.12)	(24.00)	(392)	(0.00)
10	12.72	32.26	24.35	10	12.72	32.26	24.35	359	0.04
20	9.22	32.65	25.27	20	9.22	32.65	25.27	271	0.07
30	8.45	32.93	25.60	30	8.45	32.93	25.60	240	0.10
40	7.24	33.27	26.05	50	6.90	33.52	26.29	174	0.14
50	6.90	33.52	26.29	75	6.75	33.72	26.47	157	0.18
75	6.75	33.72	26.47	100	6.49	33.84	26.60	145	0.22
100	6.49	33.84	26.60	150	6.29	33.88	26.65	140	0.29
125	6.33	33.86	26.63						
150	6.29	33.88	26.65						

S3

HMCS CEDARWOOD; July 18, 1951; 1500 GCT; 48°16'N, 125°38'W; sounding, 177 m; wind, calm; weather, cloudy; sea, calm.

2	14.72	31.65	23.48	0	(14.72)	(31.65)	(23.48)	(442)	(0.00)
10	13.18	31.83	23.93	10	13.18	31.83	23.93	399	0.04
20	11.75	32.22	24.50	20	11.75	32.22	24.50	344	0.08
30	8.01	32.50	25.33	30	8.01	32.50	25.33	265	0.11
40	7.11	32.57	25.51	50	6.72	32.65	25.63	237	0.16
50	6.72	32.65	25.63	75	7.18	33.31	26.09	193	0.21
75	7.18	33.31	26.09	100	7.14	33.69	26.39	164	0.26
100	7.14	33.69	26.39	150	6.75	33.88	26.59	146	0.34
125	6.94	33.86	26.55						
150	6.75	33.88	26.59						

S4

HMCS CEDARWOOD; July 18, 1951; 1700 GCT; 48°09'N, 126°04'W; sounding, 914 m; wind, 140°, force 3; weather, cloudy; sea, smooth.

2	15.39	32.14	23.71	0	(15.39)	(32.14)	(23.71)	(420)	(0.00)
10	14.93	32.17	23.83	10	14.93	32.17	23.83	408	0.04
20	13.48	32.28	24.21	20	13.48	32.28	24.21	372	0.08
30	10.66	32.31	24.76	30	10.66	32.31	24.76	320	0.12
50	7.35	32.48	25.41	50	7.35	32.48	25.41	258	0.17
75	7.10	32.74	25.65	75	7.10	32.74	25.65	235	0.24
100	7.12	33.20	26.01	100	7.12	33.20	26.01	201	0.29
125	7.25	33.50	26.23	150	7.05	33.70	26.41	163	0.38
150	7.05	33.70	26.41	200	6.56	33.98	26.70	135	0.46
200	6.56	33.98	26.70	250	6.18	34.02	26.78	128	0.52
300	5.88	34.05	26.84	300	5.88	34.05	26.84	122	0.59
400	5.53	34.08	26.91	400	5.53	34.08	26.91	115	0.71
500	5.16	34.13	26.99	500	5.16	34.13	26.99	108	0.83
600	4.76	34.19	27.08	600	4.76	34.19	27.08	99	0.94
700	4.39	34.24	27.16	800	4.18	34.31	27.24	84	1.13
800	4.18	34.31	27.24						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
S5	HMCS CEDARWOOD; July 18, 1951; 2000 GCT; 48°29'N, 126°04'W; sounding, 151 m; wind, 140°, force 2; weather, cloudy; sea, smooth.								
2	14.90	32.24	23.89	0	(14.90)	(32.24)	(23.89)	(402)	(0.00)
10	11.99	32.31	24.53	10	11.99	32.31	24.53	341	0.04
20	9.14	32.41	25.09	20	9.14	32.41	25.09	288	0.07
30	7.59	32.52	25.41	30	7.59	32.52	25.41	258	0.10
40	7.09	32.55	25.50	50	6.87	32.60	25.57	242	0.15
50	6.87	32.60	25.57	75	7.06	33.19	26.01	201	0.20
75	7.06	33.19	26.01	100	7.03	33.41	26.19	184	0.25
100	7.03	33.41	26.19						
125	6.70	33.84	26.57						
S6	HMCS CEDARWOOD; July 18, 1951; 2200 GCT; 48°45'N, 126°04'W; sounding, 96 m; wind, 180°, force 1; weather, cloudy; sea, calm.								
2	13.16	32.19	24.21	0	(13.16)	(32.19)	(24.21)	(372)	(0.00)
10	10.65	32.29	24.75	10	10.65	32.29	24.75	320	0.04
20	9.59	32.55	25.13	20	9.59	32.55	25.13	284	0.06
30	8.42	32.88	25.57	30	8.42	32.88	25.57	242	0.09
40	7.68	33.05	25.81	50	7.07	33.22	26.03	199	0.14
50	7.07	33.22	26.03	75	6.95	33.43	26.21	182	0.18
75	6.95	33.43	26.21						
S7	HMCS CEDARWOOD; July 19, 1951; 0100 GCT; 48°41'N, 125°34'W; sounding, 164 m; wind, calm; weather, cloudy; sea, calm.								
2	13.26	32.26	24.24	0	(13.26)	(32.26)	(24.24)	(369)	(0.00)
10	11.10	32.41	24.77	10	11.10	32.41	24.77	319	0.03
20	9.52	32.64	25.21	20	9.52	32.64	25.21	277	0.06
30	8.59	32.78	25.47	30	8.59	32.78	25.47	252	0.09
40	8.46	32.96	25.63	50	7.48	33.24	25.99	202	0.14
50	7.48	33.24	25.99	75	7.13	33.40	26.16	186	0.18
75	7.13	33.40	26.16	100	7.05	33.50	26.25	178	0.23
100	7.05	33.50	26.25	150	6.75	33.65	26.41	163	0.32
125	6.95	33.55	26.31						
150	6.75	33.65	26.41						
S8	HMCS CEDARWOOD; July 19, 1951; 0400 GCT; 48°36'N, 125°07'W; sounding, 91 m; wind, 140°, force 2; weather, cloudy; sea, calm.								
2	11.09	31.91	24.38	0	(11.09)	(31.91)	(24.38)	(356)	(0.00)
10	10.83	32.34	24.76	10	10.83	32.34	24.76	320	0.03
20	10.34	32.50	24.97	20	10.34	32.50	24.97	300	0.06
30	8.12	33.02	25.72	30	8.12	33.02	25.72	228	0.09
40	7.91	33.29	25.97	50	7.30	33.36	26.11	191	0.13
50	7.30	33.36	26.11	75	6.54	33.79	26.55	149	0.18
75	6.54	33.79	26.55						
S9	HMCS CEDARWOOD; July 19, 1951; 0500 GCT; 48°35'N, 124°56'W; sounding, 54 m; wind, calm; weather, cloudy; sea, calm.								
2	11.83	31.38	23.84	0	(11.83)	(31.38)	(23.84)	(407)	(0.00)
10	10.45	31.67	24.30	10	10.45	31.67	24.30	363	0.04
20	10.47	31.79	24.39	20	10.47	31.79	24.39	355	0.07
30	8.77	32.28	25.05	30	8.77	32.28	25.05	292	0.11
40	8.25	32.86	25.58	50	7.73	33.29	25.99	202	0.16
50	7.73	33.29	25.99						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S10 HMCS CEDARWOOD; July 19, 1951; 0700 GCT; 48°26'N, 124°56'W; sounding, 228 m; wind, 220°, force 2; weather, cloudy; sea, calm.

2	15.00	31.78	23.52	0	(15.00)	(31.78)	(23.52)	(438)	(0.00)
10	12.21	32.24	24.43	10	12.21	32.24	24.43	351	0.04
20	10.36	32.53	24.99	20	10.36	32.53	24.99	298	0.07
30	9.85	32.62	25.14	30	9.85	32.62	25.14	283	0.10
40	8.01	32.65	25.45	50	7.89	33.12	25.84	217	0.15
50	7.89	33.12	25.84	75	6.73	33.64	26.41	163	0.20
75	6.73	33.64	26.41	100	6.54	33.76	26.53	151	0.24
100	6.54	33.76	26.53	150	6.37	33.88	26.64	141	0.31
125	6.36	33.84	26.61	200	6.36	33.88	26.64	141	0.38
150	6.37	33.88	26.64						
200	6.36	33.88	26.64						

S11 HMCS CEDARWOOD; July 19, 1951; 1100 GCT;[a] 48°15'N, 124°56'W; sounding, 2115 fm; wind, calm; weather, cloudy; sea, calm.

0	14.70	32.09	23.82	0	14.70	32.09	23.82	409	0.00
4	14.50	32.09	23.86	10	14.37	32.09	23.89	403	0.04
16	14.23	32.09	23.92	20	13.28	32.19	24.19	374	0.08
26	10.84	32.50	24.88	30	8.54	32.81	25.50	249	0.11
30	8.54	32.81	25.50	50	7.29	33.14	25.94	207	0.16
40	7.35	32.96	25.79	75	7.00	33.72	26.43	161	0.20
50	7.29	33.14	25.94	100	6.79	33.89	26.60	145	0.24
75	7.00	33.72	26.43						
100	6.79	33.89	26.60						

S12 HMCS CEDARWOOD; July 19, 1951; 1100 GCT;[b] 48°04'N, 124°56'W; sounding, 65 fm; wind, missing; weather, cloudy; sea, missing.

2	14.96	31.72	23.48	0	(14.96)	(31.72)	(23.48)	(442)	(0.00)
10	13.15	31.91	24.00	10	13.15	31.91	24.00	392	0.04
20	8.85	32.69	25.36	20	8.85	32.69	25.36	262	0.08
30	7.35	32.88	25.72	30	7.35	32.88	25.72	228	0.10
40	7.32	33.03	25.85	50	7.12	33.38	26.15	187	0.14
50	7.12	33.38	26.15						
60	6.88	33.64	26.39						

S13 HMCS CEDARWOOD; July 19, 1951; 1400 GCT; 47°46'N, 124°56'W; sounding, 93 m; wind, calm; weather, drizzle; sea, smooth.

2	15.56	30.86	22.69	0	(15.56)	(30.86)	(22.69)	(517)	(0.00)
10	13.34	32.22	24.20	10	13.34	32.22	24.20	373	0.04
20	8.55	32.76	25.46	20	8.55	32.76	25.46	253	0.08
30	7.60	33.05	25.82	30	7.60	33.05	25.82	219	0.10
40	7.12	33.27	26.06	50	7.06	33.52	26.27	176	0.14
50	7.06	33.52	26.27	75	7.61	33.82	26.43	161	0.18
75	7.61	33.82	26.43						

S14 HMCS CEDARWOOD; July 19, 1951; 1700 GCT; 47°46'N, 125°28'W; sounding, 1920 m; wind, 270°, force 1; weather, cloudy; sea, smooth.

2	15.23	31.95	23.60	0	(15.23)	(31.95)	(23.60)	(430)	(0.00)
10	14.83	32.05	23.76	10	14.83	32.05	23.76	415	0.04
20	9.76	32.41	24.99	20	9.76	32.41	24.99	298	0.08
30	7.58	32.50	25.39	30	7.58	32.50	25.39	260	0.11
40	7.12	32.55	25.50	50	7.04	32.67	25.60	240	0.16
50	7.04	32.67	25.60	75	7.11	33.20	26.01	201	0.21
75	7.11	33.20	26.01	100	7.13	33.41	26.17	185	0.26
100	7.13	33.41	26.17	150	7.18	33.88	26.53	151	0.34
125	7.46	33.76	26.40	200	6.60	33.96	26.68	137	0.42
150	7.18	33.88	26.53	400	(5.84)	(34.05)	(26.84)	(122)	
200	6.60	33.96	26.68						
400	(5.84)	(34.05)	(26.84)						

a) Time of observation questionable; same time reported on next station in pattern (S12).
b) Time of observation questionable; same time reported on preceding station in pattern (S11).

POG

C-2

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

SI5

HMCS CEDARWOOD; July 19, 1951; 2000 GCT; 47°46'N, 126°00'W; sounding, 1920 m; wind, 270°, force 1; weather, cloudy; sea, smooth.

2	15.36	32.09	23.68	0	(15.36)	(32.09)	(23.68)	(422)	(0.00)
10	14.40	32.09	23.88	10	14.40	32.09	23.88	403	0.04
20	13.74	32.14	24.05	20	13.74	32.14	24.05	387	0.08
30	11.32	32.19	24.56	30	11.32	32.19	24.56	339	0.12
50	7.28	32.45	25.40	50	7.28	32.45	25.40	259	0.18
75	6.93	32.78	25.70	75	6.93	32.78	25.70	230	0.24
100	6.92	33.14	25.99	100	6.92	33.14	25.99	202	0.29
125	7.07	33.58	26.31	150	7.06	33.74	26.44	160	0.38
150	7.06	33.74	26.44	200	6.74	33.89	26.60	145	0.46
200	6.74	33.89	26.60	250	6.44	33.93	26.67	138	0.53
300	6.11	33.96	26.74	300	6.11	33.96	26.74	131	0.60
400	5.39	34.00	26.86	400	5.39	34.00	26.86	120	0.73
600	4.69	34.20	27.10	500	5.02	34.11	26.99	108	0.85
800	4.12	34.31	27.25	600	4.69	34.20	27.10	97	0.96
1000	3.57	34.41	27.38	800	4.12	34.31	27.25	83	1.15
1200	3.19	34.44	27.44	1000	3.57	34.41	27.38	71	1.32
				1200	3.19	34.44	27.44	65	1.47

SI6

HMCS CEDARWOOD; July 19, 1951; 2300 GCT; 47°47'N, 126°28'W; sounding, 493 m; wind, 290°, force 3; weather, cloudy; sea, calm.

2	15.45	32.15	23.70	0	(15.45)	(32.15)	(23.70)	(421)	(0.00)
10	14.92	32.14	23.81	10	14.92	32.14	23.81	411	0.04
20	13.85	32.15	24.04	20	13.85	32.15	24.04	388	0.08
30	12.98	32.24	24.28	30	12.98	32.24	24.28	365	0.12
50	8.58	32.33	25.12	50	8.58	32.33	25.12	285	0.18
75	7.03	32.88	25.77	75	7.03	32.88	25.77	223	0.25
100	7.00	33.26	26.07	100	7.00	33.26	26.07	195	0.30
125	7.10	33.60	26.32	150	6.93	33.76	26.47	157	0.39
150	6.93	33.76	26.47	200	6.45	33.86	26.62	143	0.47
200	6.45	33.86	26.62	250	5.96	33.89	26.70	135	0.54
300	5.59	33.94	26.79	300	5.59	33.94	26.79	127	0.60
400	5.21	34.08	26.94	400	5.21	34.08	26.94	112	0.73

SI7A

HMCS CEDARWOOD; July 20, 1951; 0200 GCT; 47°47'N, 126°55'W; sounding, missing; wind, 290°, force 3; weather, clear; sea, calm.

2	15.73	32.17	23.66	0	(15.73)	(32.17)	(23.66)	(424)	(0.00)
10	14.48	32.19	23.94	10	14.48	32.19	23.94	398	0.04
20	13.78	32.26	24.14	20	13.78	32.26	24.14	379	0.08
30	12.34	32.29	24.44	30	12.34	32.29	24.44	350	0.12
49	7.56	32.41	25.33	50	7.54	32.42	25.34	264	0.18
75	7.11	32.86	25.74	75	7.11	32.86	25.74	226	0.24
100	7.03	33.43	26.20	100	7.03	33.43	26.20	183	0.29
125	7.01	33.62	26.35	150	6.95	33.79	26.49	155	0.38
150	6.95	33.79	26.49	200	6.48	33.91	26.65	140	0.45
200	6.48	33.91	26.65	250	6.10	33.92	26.71	134	0.52
300	5.77	33.98	26.80	300	5.77	33.98	26.80	126	0.59
401	5.24	34.22	27.05	400	5.24	34.22	27.05	102	0.71
600	4.53	34.36	27.24	500	4.87	34.30	27.16	92	0.81
800	3.95	34.39	27.33	600	4.53	34.36	27.24	84	0.90
1000	3.45	34.41	27.39	800	3.95	34.39	27.33	75	1.07
1200	3.03	34.46	27.47	1000	3.45	34.41	27.39	70	1.23
				1200	3.03	34.46	27.47	62	1.38

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; July 20, 1951; 0400 GCT; 47°47'N, 126°55'W; sounding, missing; wind, 290°, force 3; weather, clear; sea, calm. S17B

0	15.15	32.21	23.81	0	15.15	32.21	23.81	411	0.00
10	14.53	32.17	23.91	10	14.53	32.17	23.91	401	0.04
20	13.59	32.19	24.12	20	13.59	32.19	24.12	380	0.08
30	12.44	32.28	24.42	30	12.44	32.28	24.42	352	0.12
40	9.83	32.33	24.92	50	7.39	32.46	25.39	260	0.18
50	7.39	32.46	25.39	75	7.11	32.86	25.74	226	0.24
75	7.11	32.86	25.74	100	7.08	33.45	26.21	182	0.29
100	7.08	33.45	26.21	150	6.89	33.81	26.52	152	0.37
125	7.00	33.69	26.41	200	6.52	33.94	26.67	138	0.45
150	6.89	33.81	26.52	250	6.13	33.98	26.75	130	0.52
200	6.52	33.94	26.67	300	5.79	34.02	26.83	123	0.58
300	5.79	34.02	26.83	400	5.30	34.08	26.93	113	0.70
400	5.30	34.08	26.93	500	4.90	34.12	27.01	106	0.82
600	4.54	34.17	27.09	600	4.54	34.17	27.09	98	0.92
800	3.96	34.29	27.25	800	3.96	34.29	27.25	83	1.12
1000	3.45	34.41	27.39	1000	3.45	34.41	27.39	70	1.29
1200	3.01	34.48	27.49	1200	3.01	34.48	27.49	60	1.43

HMCS CEDARWOOD; July 20, 1951; 1200 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 300°, force 4; weather, overcast; sea, smooth. S17C

0	15.30	32.21	23.78	0	15.30	32.21	23.78	414	0.00
20	13.67	32.22	24.13	10	14.64	32.22	23.93	399	0.04
40	10.83	32.33	24.75	20	13.67	32.22	24.13	380	0.08
50	7.67	32.40	25.30	30	12.83	32.27	24.34	360	0.12
75	7.03	32.79	25.70	50	7.67	32.40	25.30	268	0.18
100	7.09	33.41	26.18	75	7.03	32.79	25.70	230	0.24
125	7.06	33.69	26.40	100	7.09	33.41	26.18	184	0.29
150	6.93	33.81	26.51	150	6.93	33.81	26.51	153	0.38
200	6.57	33.88	26.62	200	6.57	33.88	26.62	143	0.46
300	5.86	34.02	26.82	300	5.86	34.02	26.82	124	0.59
400	5.31	34.06	26.92	400	5.31	34.06	26.92	114	0.72
600	4.51	34.24	27.15	500	4.89	34.16	27.04	103	0.83
800	3.91	34.32	27.28	600	4.51	34.24	27.15	92	0.93
1000	3.42	34.41	27.40	800	3.91	34.32	27.28	80	1.12
1200	2.99	34.48	27.49	1000	3.42	34.41	27.40	69	1.28
				1200	2.99	34.48	27.49	60	1.43

HMCS CEDARWOOD; July 20, 1951; 1400 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 300°, force 2; weather, cloudy; sea, smooth. S17D

0	15.30	32.21	23.78	0	15.30	32.21	23.78	414	0.00
10	15.14	32.19	23.80	10	15.14	32.19	23.80	411	0.04
20	13.68	32.21	24.12	20	13.68	32.21	24.12	380	0.08
30	12.68	32.28	24.37	30	12.68	32.28	24.37	357	0.12
40	10.43	32.28	24.78	50	7.58	32.57	25.45	254	0.18
50	7.58	32.57	25.45	75	7.04	32.96	25.83	218	0.24
75	7.04	32.96	25.83	100	7.07	33.45	26.21	182	0.29
100	7.07	33.45	26.21	150	6.95	33.84	26.53	151	0.37
125	7.06	33.67	26.39	200	6.45	33.94	26.68	137	0.45
150	6.95	33.84	26.53	250	6.15	33.94	26.72	133	0.52
200	6.45	33.94	26.68	300	5.86	33.96	26.77	128	0.58
300	5.86	33.96	26.77	400	5.30	34.06	26.92	114	0.71
400	5.30	34.06	26.92	500	4.88	34.14	27.03	104	0.82
600	4.51	34.22	27.13	600	4.51	34.22	27.13	94	0.93
800	3.92	34.36	27.31	800	3.92	34.36	27.31	77	1.11
1000	3.44	34.43	27.41	1000	3.44	34.43	27.41	68	1.27
1200	3.03	34.48	27.49	1200	3.03	34.48	27.49	60	1.41

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
SI7E	HMCS CEDARWOOD; July 20, 1951; 1600 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 320°, force 2; weather, cloudy; sea, smooth.								
0	15.10	32.24	23.85	0	15.10	32.24	23.85	406	0.00
10	15.07	32.24	23.85	10	15.07	32.24	23.85	406	0.04
20	13.81	32.21	24.09	20	13.81	32.21	24.09	383	0.08
30	12.35	32.24	24.40	30	12.35	32.24	24.40	354	0.12
40	8.54	32.34	25.13	50	7.37	32.88	25.72	228	0.18
50	7.37	32.88	25.72	75	7.06	32.88	25.76	224	0.23
75	7.06	32.88	25.76	100	7.09	33.36	26.14	188	0.28
100	7.09	33.36	26.14	150	6.94	33.88	26.57	148	0.37
125	7.02	33.70	26.41	200	6.37	33.94	26.69	136	0.44
150	6.94	33.88	26.57	250	6.07	33.96	26.74	131	0.51
200	6.37	33.94	26.69	300	5.78	33.98	26.80	126	0.58
300	5.78	33.98	26.80	400	5.26	34.05	26.91	115	0.70
400	5.26	34.05	26.91	500	4.85	34.12	27.02	105	0.82
600	4.50	34.19	27.11	600	4.50	34.19	27.11	96	0.92
800	4.01	34.31	27.26	800	4.01	34.31	27.26	82	1.11
1000	3.46	-	-	1000	3.46				
1200	3.00	-	-	1200	3.00				
SI7F	HMCS CEDARWOOD; July 20, 1951; 1800 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 320°, force 5; weather, cloudy; sea, slight.								
0	15.20	32.19	23.79	0	15.20	32.19	23.79	412	0.00
10	15.07	32.19	23.82	10	15.07	32.19	23.82	409	0.04
20	13.74	32.24	24.13	20	13.74	32.24	24.13	380	0.08
30	12.99	32.28	24.31	30	12.99	32.28	24.31	362	0.12
40	7.70	32.43	25.32	50	7.12	32.53	25.48	251	0.18
50	7.12	32.53	25.48	75	7.11	33.08	25.91	210	0.24
75	7.11	33.08	25.91	100	7.08	33.53	26.27	176	0.28
100	7.08	33.53	26.27	150	6.84	33.86	26.56	148	0.37
125	7.06	33.77	26.46	200	6.28	33.94	26.70	135	0.44
150	6.84	33.86	26.56	250	6.02	34.01	26.79	127	0.51
200	6.28	33.94	26.70	300	5.76	34.05	26.85	121	0.57
300	5.76	34.05	26.85	400	5.23	34.08	26.94	112	0.69
400	5.23	34.08	26.94	500	4.81	34.15	27.05	102	0.80
600	4.45	34.22	27.14	600	4.45	34.22	27.14	93	0.91
800	3.91	34.37	27.32	800	3.91	34.37	27.32	76	1.09
1000	3.46	34.36	27.35	1000	3.46	34.36	27.35	74	1.25
SI7G	HMCS CEDARWOOD; July 20, 1951; 2000 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 290°, force 6; weather, cloudy; sea, slight.								
0	15.22	32.17	23.77	0	15.22	32.17	23.77	414	0.00
10	15.10	32.21	23.82	10	15.10	32.21	23.82	409	0.04
20	13.83	32.21	24.09	20	13.83	32.21	24.09	383	0.08
30	12.52	32.31	24.43	30	12.52	32.31	24.43	351	0.12
40	10.36	32.31	24.82	50	7.72	32.41	25.30	268	0.18
50	7.72	32.41	25.30	75	7.06	32.93	25.80	221	0.24
75	7.06	32.93	25.80	100	7.09	33.43	26.19	184	0.29
100	7.09	33.43	26.19	150	6.94	33.81	26.51	153	0.38
125	7.06	33.65	26.37	200	6.54	33.93	26.66	139	0.45
150	6.94	33.81	26.51	250	6.13	34.00	26.77	128	0.52
200	6.54	33.93	26.66	300	5.76	34.05	26.85	121	0.58
300	5.76	34.05	26.85	400	5.14	34.10	26.97	110	0.70
400	5.14	34.10	26.97	500	4.81	34.16	27.05	102	0.81
600	4.49	34.22	27.14	600	4.49	34.22	27.14	93	0.92
800	3.88	34.34	27.30	800	3.88	34.34	27.30	78	1.10
1000	3.40	34.43	27.41	1000	3.40	34.43	27.41	68	1.26
1200	3.02	34.46	27.47	1200	3.02	34.46	27.47	62	1.41

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

HMCS CEDARWOOD; July 20, 1951; 2200 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 330°, force 5; weather, cloudy; sea, slight. S17H

0	15.25	32.22	23.80	0	15.25	32.22	23.80	411	0.00
10	15.11	32.22	23.83	10	15.11	32.22	23.83	408	0.04
20	13.80	32.21	24.10	20	13.80	32.21	24.10	382	0.08
30	12.54	32.29	24.41	30	12.54	32.29	24.41	353	0.12
40	9.51	32.31	24.96	50	7.61	32.43	25.34	264	0.18
50	7.61	32.43	25.34	75	7.08	32.90	25.78	222	0.24
75	7.08	32.90	25.78	100	7.08	33.41	26.18	184	0.29
100	7.08	33.41	26.18	150	6.92	33.79	26.50	154	0.38
125	7.04	33.65	26.37	200	6.45	33.96	26.70	135	0.45
150	6.92	33.79	26.50	250	6.07	34.01	26.78	128	0.52
200	6.45	33.96	26.70	300	5.74	34.05	26.86	120	0.58
300	5.74	34.05	26.86	400	5.21	34.08	26.94	112	0.70
400	5.21	34.08	26.94	500	4.79	34.16	27.06	101	0.81
600	4.42	34.23	27.15	600	4.42	34.23	27.15	92	0.92
800	3.87	34.32	27.28	800	3.87	34.32	27.28	80	1.10
1000	3.41	34.42	27.41	1000	3.41	34.42	27.41	68	1.26
1200	2.97	34.48	27.49	1200	2.97	34.48	27.49	60	1.41

HMCS CEDARWOOD; July 21, 1951; 0000 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 340°, force 4; weather, cloudy; sea, slight. S17I

0	15.35	32.22	23.78	0	15.35	32.22	23.78	413	0.00
10	15.20	32.19	23.79	10	15.20	32.19	23.79	412	0.04
20	13.78	32.21	24.10	20	13.78	32.21	24.10	382	0.08
30	12.74	32.26	24.35	30	12.74	32.26	24.35	359	0.12
40	11.28	32.28	24.63	50	8.29	32.35	25.18	280	0.18
55	7.33	32.40	25.35	75	6.99	32.76	25.68	232	0.25
75	6.99	32.76	25.68	100	7.06	33.34	26.13	189	0.30
100	7.06	33.34	26.13	150	6.94	33.81	26.51	153	0.39
125	6.96	33.60	26.34	200	6.49	33.89	26.63	142	0.46
150	6.94	33.81	26.51	250	6.10	33.93	26.72	133	0.53
200	6.49	33.89	26.63	300	5.76	33.98	26.80	126	0.60
300	5.76	33.98	26.80	400	5.26	34.12	26.97	110	0.72
400	5.26	34.12	26.97	500	4.92	34.18	27.06	101	0.83
600	4.58	34.23	27.13	600	4.58	34.23	27.13	94	0.93
800	3.90	34.32	27.28	800	3.90	34.32	27.28	80	1.12
1000	3.40	34.31	27.32	1000	3.40	34.31	27.32	76	1.29
1200	3.00	34.44	27.46	1200	3.00	34.44	27.46	63	1.45

HMCS CEDARWOOD; July 21, 1951; 0200 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 340°, force 4; weather, cloudy; sea, slight. S17J

0	15.35	32.19	23.75	0	15.35	32.19	23.75	416	0.00
10	15.10	32.21	23.82	10	15.10	32.21	23.82	409	0.04
20	13.50	32.22	24.16	20	13.50	32.22	24.16	377	0.08
30	12.36	32.31	24.46	30	12.36	32.31	24.46	348	0.12
40	8.57	32.33	25.12	50	7.28	32.41	25.37	262	0.18
50	7.28	32.41	25.37	75	7.28	32.41	25.37	262	0.24
100	7.28	32.41	25.37	100	7.28	32.41	25.37	262	0.31
125	7.28	32.79	25.66	150	7.12	33.52	26.26	177	0.42
150	7.12	33.52	26.26	200	6.83	33.82	26.53	151	0.50
200	6.83	33.82	26.53	250	6.39	33.91	26.66	139	0.58
300	6.00	33.98	26.77	300	6.00	33.98	26.77	128	0.65
400	5.40	34.03	26.88	400	5.40	34.03	26.88	118	0.77
600	4.53	34.22	27.13	500	4.94	34.14	27.02	105	0.89
800	3.89	34.32	27.28	600	4.53	34.22	27.13	94	0.99
1000	3.38	34.39	27.38	800	3.89	34.32	27.28	80	1.18
1200	3.00	34.46	27.48	1000	3.38	34.39	27.38	71	1.35
				1200	3.00	34.46	27.48	61	1.49

POG

C-2

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
S17K	HMCS CEDARWOOD; July 21, 1951; 0400 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 300°, force 4; weather, cloudy; sea, slight.								
0	15.25	32.17	23.76	0	15.25	32.17	23.76	415	0.00
10	15.18	32.22	23.81	10	15.18	32.22	23.81	410	0.04
20	13.61	32.22	24.14	20	13.61	32.22	24.14	379	0.08
30	12.16	32.21	24.42	30	12.16	32.21	24.42	352	0.12
40	10.00	32.31	24.88	50	7.20	32.29	25.28	270	0.18
50	7.20	32.29	25.28	75	7.10	32.38	25.37	262	0.25
75	7.10	32.38	25.37	100	6.98	32.84	25.74	226	0.31
100	6.98	32.84	25.74	150	7.04	33.64	26.36	167	0.41
125	7.09	33.45	26.21	200	6.76	33.89	26.60	145	0.49
150	7.04	33.64	26.36	250	6.40	33.95	26.69	136	0.56
200	6.76	33.89	26.60	300	6.08	33.98	26.76	129	0.63
300	6.08	33.98	26.76	400	5.55	33.93	26.79	127	0.76
400	5.55	33.93	26.79	500	4.93	34.06	26.96	110	0.88
600	4.55	34.12	27.05	600	4.55	34.12	27.05	102	0.99
800	4.52	34.05	27.00	800	4.52	34.05	27.00	107	1.22
1000	4.24	34.29	27.22	1000	4.24	34.29	27.22	86	1.43
1200	3.45	34.44	27.42	1200	3.45	34.44	27.42	67	1.60
S17L	HMCS CEDARWOOD; July 21, 1951; 0600 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 360°, force 4; weather, cloudy; sea, slight.								
0	15.25	32.22	23.80	0	15.25	32.22	23.80	411	0.00
10	15.22	32.22	23.81	10	15.22	32.22	23.81	410	0.04
20	13.78	32.24	24.12	20	13.78	32.24	24.12	380	0.08
30	12.01	32.31	24.52	30	12.01	32.31	24.52	342	0.12
40	8.60	32.36	25.14	50	7.40	32.45	25.38	260	0.18
50	7.40	32.45	25.38	75	7.10	32.98	25.84	217	0.24
75	7.10	32.98	25.84	100	7.09	33.43	26.19	184	0.29
100	7.09	33.43	26.19	150	6.87	33.84	26.54	150	0.37
125	7.05	33.65	26.37	200	6.46	33.91	26.65	140	0.44
150	6.87	33.84	26.54	250	6.08	33.98	26.76	129	0.51
200	6.46	33.91	26.65	300	5.75	34.03	26.84	122	0.58
300	5.75	34.03	26.84	400	5.26	34.10	26.95	111	0.70
400	5.26	34.10	26.95	500		34.10			
600	-	34.10	-	600		34.10			
800	5.10	34.10	26.97	800	5.10	34.10	26.97	110	
1000	4.56	34.19	27.10	1000	4.56	34.19	27.10	97	
1200	4.34	34.24	27.17	1200	4.34	34.24	27.17	91	
S17M	HMCS CEDARWOOD; July 21, 1951; 0800 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 360°, force 4; weather, cloudy; sea, slight.								
0	15.15	32.17	23.78	0	15.15	32.17	23.78	413	0.00
10	15.04	32.19	23.82	10	15.04	32.19	23.82	409	0.04
20	14.15	32.21	24.02	20	14.15	32.21	24.02	390	0.08
30	13.00	32.26	24.29	30	13.00	32.26	24.29	364	0.12
40	11.74	32.38	24.63	50	8.71	32.41	25.16	281	0.18
50	8.71	32.41	25.16	75	6.99	32.79	25.70	230	0.25
75	6.99	32.79	25.70	100	7.12	33.40	26.16	186	0.30
100	7.12	33.40	26.16	150	6.81	33.84	26.55	149	0.38
125	7.00	33.74	26.45	200	6.43	33.96	26.70	135	0.46
150	6.81	33.84	26.55	250	6.09	33.98	26.76	129	0.52
200	6.43	33.96	26.70	300	5.74	34.00	26.82	124	0.59
300	5.74	34.00	26.82	400	5.05	34.06	26.95	111	0.71
400	5.05	34.06	26.95	500	4.70	34.16	27.07	100	0.82
600	4.39	34.24	27.16	600	4.39	34.24	27.16	92	0.92
800	3.87	34.34	27.30	800	3.87	34.34	27.30	78	1.11
1000	3.37	34.44	27.43	1000	3.37	34.44	27.43	66	1.26
1200	2.96	34.46	27.48	1200	2.96	34.46	27.48	61	1.41

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S17N

HMCS CEDARWOOD; July 21, 1951; 1000 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 330°, force 4; weather, cloudy; sea, slight.

0	15.20	32.19	23.79	0	15.20	32.19	23.79	412	0.00
10	15.19	32.21	23.80	10	15.19	32.21	23.80	411	0.04
20	15.04	32.19	23.82	20	15.04	32.19	23.82	409	0.08
30	15.00	32.19	23.83	30	15.00	32.19	23.83	408	0.12
40	12.74	32.34	24.41	50	9.00	32.46	25.15	282	0.19
50	9.00	32.46	25.15	75	7.04	32.76	25.67	233	0.26
75	7.04	32.76	25.67	100	7.11	33.78	26.46	158	0.31
100	7.11	33.78	26.46	150	6.98	33.82	26.51	153	0.38
125	6.94	33.62	26.36	200	6.58	33.93	26.65	140	0.46
150	6.98	33.82	26.51	250	6.18	33.98	26.75	130	0.53
200	6.58	33.93	26.65	300	5.81	34.02	26.82	124	0.59
300	5.81	34.02	26.82	400	5.19	34.08	26.95	111	0.72
400	5.19	34.08	26.95	500	4.78	34.16	27.06	101	0.83
600	4.42	34.22	27.14	600	4.42	34.22	27.14	93	0.93
800	3.87	34.32	27.28	800	3.87	34.32	27.28	80	1.12
1000	3.35	34.38	27.38	1000	3.35	34.38	27.38	71	1.28
1200	3.04	34.44	27.46	1200	3.04	34.44	27.46	63	1.43

S17O

HMCS CEDARWOOD; July 21, 1951; 1200 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 300°, force 3; weather, overcast; sea, slight.

0	15.10	32.17	23.79	0	15.10	32.17	23.79	412	0.00
10	15.11	32.15	23.78	10	15.11	32.15	23.78	413	0.04
20	14.52	32.17	23.92	20	14.52	32.17	23.92	400	0.08
30	12.21	32.24	24.43	30	12.21	32.24	24.43	351	0.12
40	9.66	32.31	24.93	50	7.41	32.45	25.38	260	0.18
50	7.41	32.45	25.38	75	6.96	32.91	25.80	221	0.24
75	6.96	32.91	25.80	100	7.11	33.36	26.13	189	0.29
100	7.11	33.36	26.13	150	6.56	33.79	26.55	149	0.38
125	6.83	33.62	26.38	200	6.47	33.90	26.65	140	0.45
150	6.56	33.79	26.55	250	6.07	33.99	26.77	128	0.52
200	6.47	33.90	26.65	300	5.72	34.05	26.86	120	0.58
300	5.72	34.05	26.86	400	5.19	34.10	26.96	110	0.70
400	5.19	34.10	26.96	500	4.83	34.16	27.05	102	0.82
600	4.49	34.22	27.14	600	4.49	34.22	27.14	93	0.92
800	3.89	34.36	27.31	800	3.89	34.36	27.31	77	1.10
1000	3.34	34.39	27.39	1000	3.34	34.39	27.39	70	1.26
1200	2.97	34.44	27.46	1200	2.97	34.44	27.46	63	1.41

S17P

HMCS CEDARWOOD; July 21, 1951; 1400 GCT; 47°46'N, 126°40'W; sounding, missing; wind, 300°, force 2; weather, cloudy; sea, slight.

0	15.20	32.19	23.79	0	15.20	32.19	23.79	412	0.00
10	15.09	32.17	23.80	10	15.09	32.17	23.80	411	0.04
20	13.48	32.21	24.16	20	13.48	32.21	24.16	377	0.08
30	11.38	32.28	24.61	30	11.38	32.28	24.61	334	0.12
40	8.49	32.34	25.14	50	7.22	32.50	25.44	255	0.18
50	7.22	32.50	25.44	75	7.04	32.93	25.81	220	0.24
75	7.04	32.93	25.81	100	7.14	33.41	26.17	185	0.29
100	7.14	33.41	26.17	150	6.97	33.82	26.52	152	0.37
125	7.09	33.70	26.40	200	6.49	33.89	26.63	142	0.45
150	6.97	33.82	26.52	250	6.11	33.97	26.75	130	0.52
200	6.49	33.89	26.63	300	5.77	34.02	26.83	123	0.58
300	5.77	34.02	26.83	400	5.25	34.03	26.90	116	0.70
400	5.25	34.03	26.90	500	4.86	34.08	26.98	109	0.82
600	4.50	34.15	27.08	600	4.50	34.15	27.08	99	0.93
800	3.88	34.32	27.28	800	3.88	34.32	27.28	80	1.12
1000	3.38	34.37	27.37	1000	3.38	34.37	27.37	72	1.29
1200	2.99	34.43	27.45	1200	2.99	34.43	27.45	64	1.44

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S18

HMCS CEDARWOOD; July 21, 1951; 1800 GCT; 48°06'N, 126°55'W; sounding, missing; wind, 320°, force 5; weather, cloudy; sea, smooth.

2	14.92	32.22	23.87	0	(14.92)	(32.22)	(23.87)	(404)	(0.00)
10	14.86	32.22	23.88	10	14.86	32.22	23.88	403	0.04
20	13.15	32.24	24.25	20	13.15	32.24	24.25	368	0.08
30	11.43	32.31	24.63	30	11.43	32.31	24.63	332	0.11
40	8.68	32.45	25.19	50	7.88	32.50	25.35	263	0.17
50	7.88	32.50	25.35	75	7.11	32.81	25.70	230	0.24
75	7.11	32.81	25.70	100	7.28	33.43	26.17	185	0.29
100	7.28	33.43	26.17	150	7.01	33.81	26.50	154	0.37
150	7.01	33.81	26.50	200	6.84	33.98	26.66	139	0.45
200	6.84	33.98	26.66	250	6.33	34.00	26.74	131	0.52
300	5.86	34.02	26.82	300	5.86	34.02	26.82	124	0.58
400	5.06	34.05	26.94	400	5.06	34.05	26.94	112	0.70

S19

HMCS CEDARWOOD; July 21, 1951; 2100 GCT; 48°28'N, 126°55'W; sounding, missing; wind, 300°, force 5; weather, cloudy; sea, slight.

2	14.64	32.24	23.95	0	(14.64)	(32.24)	(23.95)	(397)	(0.00)
10	14.60	32.24	23.95	10	14.60	32.24	23.95	397	0.04
20	13.78	32.21	24.10	20	13.78	32.21	24.10	382	0.08
30	8.67	32.36	25.13	30	8.67	32.36	25.13	284	0.11
40	7.99	32.48	25.32	50	7.59	32.53	25.42	257	0.17
50	7.59	32.53	25.42	75	6.95	32.67	25.61	239	0.23
75	6.95	32.67	25.61	100	6.96	33.19	26.02	200	0.28
100	6.96	33.19	26.02	150	7.11	33.87	26.54	150	0.37
125	7.05	33.62	26.35	200	6.82	33.93	26.62	143	0.45
150	7.11	33.87	26.54	250	6.36	33.98	26.72	133	0.52
200	6.82	33.93	26.62	300	6.00	34.02	26.80	126	0.58
300	6.00	34.02	26.80	400	5.60	34.06	26.88	118	0.71
400	5.60	34.06	26.88						

S20

HMCS CEDARWOOD; July 22, 1951; 0000 GCT; 48°46'N, 126°55'W; sounding, missing; wind, 300°, force 5; weather, cloudy; sea, slight.

10	13.84	-	-	0	(13.84)	(32.03)	(23.95)	(397)	(0.00)
20	11.63	-	-	10	13.84	32.16	24.05	387	0.04
30	8.70	-	-	20	11.63	32.28	24.57	338	0.08
40	7.56	32.46	25.37	30	8.70	32.38	25.14	283	0.11
50	6.92	32.53	25.51	50	6.92	32.53	25.51	248	0.16
75	6.32	32.64	25.67	75	6.32	32.64	25.67	233	0.22
100	6.68	33.03	25.93	100	6.68	33.03	25.93	208	0.28
125	6.88	33.40	26.20	150	6.87	33.67	26.41	163	0.37
150	6.87	33.67	26.41	200	6.65	33.86	26.59	146	0.45
200	6.65	33.86	26.59	250	6.24	33.93	26.70	135	0.52
300	5.90	33.98	26.78	300	5.90	33.98	26.78	128	0.59
400	5.42	34.02	26.87	400	5.42	34.02	26.87	119	0.71

S21

HMCS CEDARWOOD; July 22, 1951; 0300 GCT; 49°06'N, 126°55'W; sounding, 365 m; wind, 320°, force 4; weather, cloudy; sea, slight.

2	13.80	32.12	24.03	0	(13.80)	(32.12)	(24.03)	(389)	(0.00)
10	10.76	32.31	24.75	10	10.76	32.31	24.75	320	0.04
20	7.93	32.60	25.42	20	7.93	32.60	25.42	257	0.06
30	7.82	32.69	25.51	30	7.82	32.69	25.51	248	0.09
40	6.72	32.58	25.57	50	6.08	32.58	25.66	234	0.14
50	6.08	32.58	25.66	75	6.58	33.02	25.94	207	0.19
75	6.58	33.02	25.94	100	7.15	33.36	26.13	189	0.24
100	7.15	33.36	26.13	150	7.00	33.82	26.51	153	0.33
125	7.15	33.72	26.41	200	6.56	34.00	26.71	134	0.40
150	7.00	33.82	26.51	250	6.19	34.05	26.80	126	0.47
200	6.56	34.00	26.71	300	5.92	34.06	26.84	122	0.53
250	6.19	34.05	26.80						
350	5.75	34.06	26.86						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S22

HMCS CEDARWOOD; July 22, 1951; 0600 GCT; 49°23'N, 127°00'W; sounding, 109 m; wind, 340°, force 4; weather, cloudy; sea, slight.

2	13.65	31.83	23.83	0	(13.65)	(31.83)	(23.83)	(408)	(0.00)
10	13.46	31.83	23.87	10	13.46	31.83	23.87	404	0.04
20	8.92	32.62	25.29	20	8.92	32.62	25.29	269	0.07
30	7.62	32.91	25.71	30	7.62	32.91	25.71	229	0.10
40	7.62	33.07	25.84	50	6.64	33.22	26.09	193	0.14
50	6.64	33.22	26.09	75	7.16	33.60	26.32	171	0.19
75	7.16	33.60	26.32						

S25

HMCS CEDARWOOD; July 22, 1951; 1800 GCT; 49°47'N, 128°09'W; sounding, missing; wind, 320°, force 4; weather, cloudy; sea, smooth.

2	14.48	32.17	23.93	0	(14.48)	(32.17)	(23.93)	(399)	(0.00)
10	14.33	32.17	23.96	10	14.33	32.17	23.96	396	0.04
20	12.43	32.40	24.51	20	12.43	32.40	24.51	343	0.08
30	11.22	32.41	24.74	30	11.22	32.41	24.74	321	0.11
40	7.86	32.52	25.37	50	6.68	32.52	25.53	246	0.17
50	6.68	32.52	25.53	75	6.25	32.52	25.59	240	0.23
75	6.25	32.52	25.59	100	6.03	32.67	25.73	227	0.29
100	6.03	32.67	25.73	150	6.74	33.03	25.93	208	0.40
125	6.21	32.76	25.78	200	6.42	33.57	26.39	164	0.49
150	6.74	33.03	25.93	250	6.41	33.64	26.45	159	0.57
200	6.42	33.57	26.39	300	6.35	33.70	26.50	154	0.65
300	6.35	33.70	26.50	400	6.05	33.82	26.64	141	0.80
400	6.05	33.82	26.64						

S26

HMCS CEDARWOOD; July 22, 1951; 2100 GCT; 50°10'N, 128°10'W; sounding, missing; wind, 340°, force 2; weather, cloudy; sea, smooth.

2	14.63	31.96	23.73	0	(14.63)	(31.96)	(23.73)	(418)	(0.00)
10	13.73	31.96	23.92	10	13.73	31.96	23.92	400	0.04
20	12.38	32.09	24.28	20	12.38	32.09	24.28	365	0.08
30	9.93	32.33	24.90	30	9.93	32.33	24.90	306	0.11
40	7.62	32.48	25.37	50	7.83	32.74	25.55	244	0.17
50	7.83	32.74	25.55	75	6.78	33.24	26.09	193	0.22
75	6.78	33.24	26.09	100	6.60	33.65	26.43	161	0.27
100	6.60	33.65	26.43	150	6.52	33.88	26.62	143	0.34
125	6.50	33.77	26.54	200	6.24	33.93	26.70	135	0.42
150	6.52	33.88	26.62	250	5.94	33.99	26.78		0.48
200	6.24	33.93	26.70	300	5.69	34.03	26.85	121	0.55
300	5.69	34.03	26.85	400	5.31	34.05	26.91	115	0.67
400	5.31	34.05	26.91						

S27

HMCS CEDARWOOD; July 23, 1951; 0400 GCT; 50°26'N, 128°04'W; sounding, 54 m; wind, missing; weather, cloudy; sea, smooth.

0	(13.60)	(32.07)	(24.03)	0	(13.60)	(32.07)	(24.03)	(389)	(0.00)
5	12.97	31.96	24.07	10	11.30	32.07	24.47	347	0.04
10	11.30	32.07	24.47	20	10.53	32.22	24.72	323	0.07
15	11.26	32.17	24.55	30	9.15	32.45	25.12	285	0.10
20	10.53	32.22	24.72						
25	9.99	32.28	24.85						
30	9.15	32.45	25.12						
35	8.40	32.58	25.34						
40	7.92	32.76	25.55						

S28

HMCS CEDARWOOD; July 23, 1951; 0600 GCT; 50°27'N, 128°14'W; sounding, 102 m; wind, 320°, force 4; weather, cloudy; sea, smooth.

2	14.29	32.00	23.83	0	(14.29)	(32.00)	(23.83)	(408)	(0.00)
10	12.69	32.05	24.19	10	12.69	32.05	24.19	374	0.04
20	10.18	32.38	24.90	20	10.18	32.38	24.90	306	0.07
30	9.64	32.38	24.99	30	9.64	32.38	24.99	298	0.10
40	8.15	32.65	25.43	50	7.25	32.98	25.82	219	0.16
50	7.25	32.98	25.82	75	6.71	33.55	26.34	169	0.20
75	6.71	33.55	26.34						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S29

HMCS CEDARWOOD; July 23, 1951; 0700 GCT; 50°27'N, 128°38'W; sounding, 274 m; wind, 360°, force 2; weather, cloudy; sea, calm.

2	15.05	31.69	23.44	0	(15.05)	(31.69)	(23.44)	(445)	(0.00)
10	14.78	31.72	23.52	10	14.78	31.72	23.52	438	0.04
20	12.42	32.12	24.30	20	12.42	32.12	24.30	363	0.08
30	8.20	32.09	24.98	30	8.20	32.09	24.98	299	0.12
40	7.85	32.34	25.23	50	7.27	32.52	25.45	254	0.17
50	7.27	32.52	25.45	75	6.36	32.79	25.79	222	0.23
75	6.36	32.79	25.79	100	6.66	33.27	26.12	190	0.28
100	6.66	33.27	26.12	150	6.42	33.77	26.55	149	0.37
125	6.56	33.53	26.34	200	6.20	33.93	26.70	135	0.44
150	6.42	33.77	26.55						
200	6.20	33.93	26.70						

S30

HMCS CEDARWOOD; July 23, 1951; 1000 GCT; 50°28'N, 129°02'W; sounding, missing; wind, 320°, force 1; weather, cloudy; sea, missing.

2	15.11	31.95	23.62	0	(15.11)	(31.95)	(23.62)	(428)	(0.00)
10	14.11	32.02	23.89	10	14.11	32.02	23.89	402	0.04
20	12.06	32.14	24.38	20	12.06	32.14	24.38	356	0.08
30	8.66	32.45	25.20	30	8.66	32.45	25.20	278	0.11
40	7.59	32.52	25.41	50	6.84	32.58	25.56	243	0.16
50	6.84	32.58	25.56	75	6.65	33.03	25.94	207	0.22
75	6.65	33.03	25.94	100	6.73	33.41	26.23	180	0.27
100	6.73	33.41	26.23	150	6.36	33.79	26.57	148	0.35
125	6.64	33.70	26.47	200	5.83	33.86	26.70	135	0.42
150	6.36	33.79	26.57	300	5.32	33.96	26.84	122	0.56
200	5.83	33.86	26.70	400	4.79	33.98	26.91	115	0.68
300	5.32	33.96	26.84						
400	4.79	33.98	26.91						

S31

HMCS CEDARWOOD; July 23, 1951; 1400 GCT; 50°28'N, 129°30'W; sounding, missing; wind, 320°, force 1; weather, cloudy; sea, missing.

0	-	31.98	-	0	14.21	31.98	23.84	407	0.00
10	10.32	32.31	24.82	10	10.32	32.31	24.82	314	0.04
20	7.92	32.78	25.57	20	7.92	32.78	25.57	242	0.06
30	7.01	33.07	25.92	30	7.01	33.07	25.92	209	0.09
40	6.66	33.31	26.16	50	6.50	33.41	26.26	177	0.12
75	6.32	33.65	26.47	75	6.32	33.65	26.47	157	0.17
100	6.44	33.88	26.63	100	6.44	33.88	26.63	142	0.20
125	6.07	33.91	26.70	150	6.04	33.94	26.73	132	0.27
150	6.04	33.94	26.73	200	5.53	33.94	26.80	126	0.34
200	5.53	33.94	26.80	250	5.51	34.00	26.85	121	0.40
300	5.42	34.05	26.90	300	5.42	34.05	26.90	116	0.46
400	5.02	34.12	27.00	400	5.02	34.12	27.00	107	0.58
600	4.50	34.20	27.12	500	4.73	34.16	27.06	101	0.69
800	4.23	34.27	27.20	600	4.50	34.20	27.12	95	0.79
1000	3.67	34.37	27.34	800	4.23	34.27	27.20	88	0.99
1200	3.08	34.43	27.45	1000	3.67	34.37	27.34	74	1.16
				1200	3.08	34.43	27.45	64	1.32

S32

HMCS CEDARWOOD; July 23, 1951; 1700 GCT; 50°47'N, 129°30'W; sounding, missing; wind, 320°, force 3; weather, cloudy; sea, smooth.

2	14.98	31.79	23.53	0	(14.98)	(31.79)	(23.53)	(437)	(0.00)
10	14.98	31.81	23.54	10	14.98	31.81	23.54	436	0.04
20	11.78	31.91	24.26	20	11.78	31.91	24.26	367	0.08
30	7.76	32.14	25.09	30	7.76	32.14	25.09	288	0.12
40	6.81	32.50	25.50	50	6.55	32.78	25.75	225	0.17
50	6.55	32.78	25.75	75	6.63	33.22	26.09	193	0.22
75	6.63	33.22	26.09	100	6.51	33.52	26.34	169	0.27
100	6.51	33.52	26.34	150	6.47	33.81	26.57	148	0.35
125	6.56	33.72	26.49	200	5.85	33.81	26.65	140	0.42
150	6.47	33.81	26.57	250	5.69	33.87	26.72	133	0.49
200	5.85	33.81	26.65	300	5.52	33.93	26.79	127	0.56
300	5.52	33.93	26.79	400	5.18	34.05	26.92	114	0.68
400	5.18	34.05	26.92						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S33

HMCS CEDARWOOD; July 23, 1951; 2000 GCT; 51°06'N, 129°30'W; sounding, 246 m; wind, 340°, force 3; weather, cloudy; sea, smooth.

2	14.88	31.60	23.40	0	(14.88)	(31.60)	(23.40)	(449)	(0.00)
10	13.13	31.86	23.96	10	13.13	31.86	23.96	396	0.04
20	9.85	32.05	24.70	20	9.85	32.05	24.70	325	0.08
30	7.90	32.28	25.18	30	7.90	32.28	25.18	280	0.11
40	7.73	32.29	25.21	50	6.85	32.52	25.51	248	0.16
50	6.85	32.52	25.51	75	6.22	32.88	25.87	119	0.22
75	6.22	32.88	25.87	100	6.22	33.22	26.14	188	0.27
100	6.22	33.22	26.14	150	6.08	33.84	26.65	140	0.35
125	6.07	33.48	26.37	200	5.88	33.82	26.66	139	0.42
150	6.08	33.84	26.65						
200	5.88	33.82	26.66						

S34

HMCS CEDARWOOD; July 23, 1951; 2300 GCT; 51°06'N, 128°58'W; sounding, 109 m; wind, 340°, force 3; weather, overcast; sea, smooth.

2	14.37	31.53	23.46	0	(14.37)	(31.53)	(23.46)	(443)	(0.00)
10	13.25	31.59	23.73	10	13.25	31.59	23.73	418	0.04
20	8.93	32.00	24.81	20	8.93	32.00	24.81	315	0.08
30	8.24	32.12	25.00	30	8.24	32.12	25.00	297	0.11
40	7.79	32.21	25.14	50	7.46	32.21	25.18	280	0.17
50	7.46	32.21	25.18	75	7.30	32.64	25.54	245	0.23
75	7.30	32.64	25.54						

S35

HMCS CEDARWOOD; July 24, 1951; 0200 GCT; 51°06'N, 128°27'W; sounding, 157 m; wind, 340°, force 3; weather, overcast; sea, smooth.

2	13.13	31.28	23.51	0	(13.13)	(31.28)	(23.51)	(439)	(0.00)
10	11.75	31.43	23.89	10	11.75	31.43	23.89	402	0.04
20	8.97	32.03	24.82	20	8.97	32.03	24.82	314	0.08
30	8.08	32.45	25.28	30	8.08	32.45	25.28	270	0.11
40	7.59	32.64	25.50	50	7.16	32.79	25.68	232	0.16
50	7.16	32.79	25.68	75	6.75	32.90	25.82	219	0.21
75	6.75	32.90	25.82	100	6.22	33.33	26.23	180	0.26
100	6.22	33.33	26.23						
125	5.88	33.81	26.65						

S36

HMCS CEDARWOOD; July 24, 1951; 0500 GCT; 51°23'N, 128°27'W; sounding, 146 m; wind, 320°, force 4; weather, cloudy; sea, smooth.

2	14.55	31.34	23.27	0	(14.55)	(31.34)	(23.27)	(462)	(0.00)
10	13.55	31.55	23.64	10	13.55	31.55	23.64	426	0.04
20	11.10	31.76	24.26	20	11.10	31.76	24.26	367	0.08
30	9.62	31.84	24.57	30	9.62	31.84	24.57	338	0.12
40	8.84	31.93	24.76	50	8.14	32.09	24.99	298	0.18
50	8.14	32.09	24.99	75	6.85	32.48	25.48	251	0.25
75	6.85	32.48	25.48	100	6.30	33.12	26.05	197	0.31
100	6.30	33.12	26.05						
125	5.97	33.64	26.50						

S37

HMCS CEDARWOOD; July 24, 1951; 0800 GCT; 51°41'N, 128°27'W; sounding, 124 m; wind, 270°, force 4; weather, clear; sea, smooth.

2	15.19	29.54	21.76	0	(15.19)	(29.54)	(21.76)	(606)	(0.00)
10	12.77	31.22	23.54	10	12.77	31.22	23.54	436	0.05
20	10.10	31.64	24.34	20	10.10	31.64	24.34	360	0.09
30	8.45	31.88	24.78	30	8.45	31.88	24.78	318	0.13
40	7.25	32.15	25.17	50	7.06	32.29	25.30	268	0.18
50	7.06	32.29	25.30	75	6.53	32.84	25.80	221	0.25
75	6.53	32.84	25.80	100	6.23	33.29	26.20	183	0.30
100	6.23	33.29	26.20						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
S38	HMCS CEDARWOOD; July 24, 1951; 1000 GCT; 51°42'N, 128°56'W; sounding, 56 m; wind, 330°, force 4; weather, clear; sea, slight.								
2	12.66	31.79	24.00	0	(12.66)	(31.79)	(24.00)	(392)	(0.00)
10	11.21	31.91	24.36	10	11.21	31.91	24.36	358	0.04
20	9.79	32.03	24.69	20	9.79	32.03	24.69	326	0.07
30	9.72	32.07	24.74	30	9.72	32.07	24.74	321	0.10
40	9.35	32.10	24.82	50	8.81	32.22	25.00	297	0.17
50	8.81	32.22	25.00						
S39	HMCS CEDARWOOD; July 24, 1951; 1400 GCT; 51°42'N, 129°28'W; sounding, 78 m; wind, 330°, force 4; weather, cloudy; sea, slight.								
2	13.11	31.71	23.85	0	(13.11)	(31.71)	(23.85)	(406)	(0.00)
10	13.02	31.72	23.87	10	13.02	31.72	23.87	404	0.04
20	9.42	31.93	24.67	20	9.42	31.93	24.67	328	0.08
30	8.31	32.17	25.03	30	8.31	32.17	25.03	294	0.11
40	7.46	32.41	25.34	50	6.82	32.72	25.67	233	0.16
50	6.82	32.72	25.67						
S40	HMCS CEDARWOOD; July 24, 1951; 1800 GCT; 51°32'N, 130°00'W; sounding, 182 m; wind, 320°, force 5; weather, cloudy; sea, slight.								
2	13.41	31.50	23.63	0	(13.41)	(31.50)	(23.63)	(427)	(0.00)
10	13.42	31.50	23.63	10	13.42	31.50	23.63	427	0.04
20	11.05	31.67	24.20	20	11.05	31.67	24.20	373	0.08
30	9.25	31.86	24.65	30	9.25	31.86	24.65	330	0.12
40	8.23	32.09	24.98	50	7.65	32.28	25.21	277	0.18
50	7.65	32.28	25.21	75	6.91	32.57	25.54	245	0.24
75	6.91	32.57	25.54	100	6.45	32.93	25.88	213	0.30
100	6.45	32.93	25.88	150	6.06	33.41	26.31	172	0.40
125	6.21	33.27	26.18						
150	6.06	33.41	26.31						
S41	HMCS CEDARWOOD; July 24, 1951; 2100 GCT; 51°56'N, 130°30'W; sounding, 384 m; wind, 320°, force 3; weather, cloudy; sea, slight.								
2	13.72	31.29	23.40	0	(13.72)	(31.29)	(23.40)	(449)	(0.00)
10	13.69	31.28	23.40	10	13.69	31.28	23.40	449	0.04
20	12.15	31.36	23.76	20	12.15	31.36	23.76	415	0.09
30	10.38	31.53	24.21	30	10.38	31.53	24.21	372	0.13
40	9.91	31.65	24.38	50	9.18	31.79	24.60	335	0.20
50	9.18	31.79	24.60	75	7.92	32.21	25.12	285	0.28
75	7.92	32.21	25.12	100	7.42	32.38	25.32	266	0.34
100	7.42	32.38	25.32	150	6.16	33.40	26.29	174	0.46
125	6.49	32.98	25.92	200	5.66	33.79	26.66	139	0.54
150	6.16	33.40	26.29						
200	5.66	33.79	26.66						
S42	HMCS CEDARWOOD; July 25, 1951; 0100 GCT; 51°53'N, 131°02'W; sounding, 192 m; wind, 330°, force 1; weather, cloudy; sea, smooth.								
2	9.93	32.28	24.86	0	(9.93)	(32.28)	(24.86)	(310)	(0.00)
10	7.72	32.57	25.43	10	7.72	32.57	25.43	256	0.03
20	7.46	32.57	25.47	20	7.46	32.57	25.47	252	0.05
30	7.25	32.52	25.46	30	7.25	32.52	25.46	253	0.08
40	7.05	32.50	25.47	50	6.36	32.62	25.65	235	0.13
50	6.36	32.62	25.65	75	6.84	33.03	25.91	210	0.18
75	6.84	33.03	25.91	100	6.44	33.38	26.24	179	0.23
100	6.44	33.38	26.24	150	5.98	33.65	26.51	153	0.32
125	6.36	33.43	26.29						
150	5.98	33.65	26.51						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S43

HMCS CEDARWOOD; July 25, 1951; 0500 GCT; 52°00'N, 131°35'W; sounding, missing; wind, 320°, force 3; weather, cloudy; sea, smooth.

2	13.75	32.17	24.08	0	(13.75)	(32.17)	(24.08)	(384)	(0.00)
10	13.46	32.15	24.12	10	13.46	32.15	24.12	380	0.04
20	11.88	32.24	24.49	20	11.88	32.24	24.49	345	0.08
30	10.52	32.26	24.75	30	10.52	32.26	24.75	320	0.11
40	9.84	32.26	24.86	50	8.94	32.31	25.05	292	0.17
50	8.94	32.31	25.05	75	6.80	32.48	25.48	251	0.24
75	6.80	32.48	25.48	100	6.08	32.64	25.70	230	0.30
100	6.08	32.64	25.70	150	6.46	33.38	26.24	274	0.40
125	6.71	33.02	25.92	200	6.09	33.70	26.54	245	0.48
150	6.46	33.38	26.24	250	5.71	33.85	26.70	230	0.56
200	6.09	33.70	26.54	300	5.38	33.96	26.83	218	0.62
300	5.38	33.96	26.83	400	4.91	34.05	26.95	206	0.74
400	4.91	34.05	26.95						

S44

HMCS CEDARWOOD; July 25, 1951; 0800 GCT; 52°18'N, 131°35'W; sounding, 320 m; wind, 330°, force 2; weather, cloudy; sea, calm.

2	11.61	32.31	24.60	0	(11.61)	(32.31)	(24.60)	(335)	(0.00)
10	10.36	32.31	24.82	10	10.36	32.31	24.82	314	0.03
20	10.09	32.40	24.93	20	10.09	32.40	24.93	303	0.06
30	9.63	32.46	25.05	30	9.63	32.46	25.05	292	0.09
40	9.07	32.52	25.19	50	8.98	32.58	25.25	273	0.15
50	8.98	32.58	25.25	75	8.26	32.65	25.41	258	0.22
75	8.26	32.65	25.41	100	7.44	32.78	25.63	237	0.28
100	7.44	32.78	25.63	150	5.97	33.60	26.47	157	0.38
125	6.58	33.12	26.02						
150	5.97	33.60	26.47						

S45

HMCS CEDARWOOD; July 25, 1951; 1100 GCT; 52°18'N, 132°08'W; sounding, 1920 m; wind, 320°, force 2; weather, overcast; sea, calm.

2	13.98	32.14	24.01	0	(13.98)	(32.14)	(24.01)	(391)	(0.00)
10	13.96	32.14	24.01	10	13.96	32.14	24.01	391	0.04
20	12.55	32.17	24.31	20	12.55	32.17	24.31	362	0.08
30	10.56	32.21	24.70	30	10.56	32.21	24.70	325	0.11
40	9.74	32.22	24.85	50	9.00	32.29	25.02	295	0.17
50	9.00	32.29	25.02	75	6.88	32.45	25.45	254	0.24
75	6.88	32.45	25.45	100	5.97	32.60	25.68	232	0.30
100	5.97	32.60	25.68	150	6.38	33.41	26.27	176	0.41
125	6.11	33.02	26.00	200	5.74	33.74	26.61	144	0.49
150	6.38	33.41	26.27	250	5.42	33.85	26.74	131	0.56
200	5.74	33.74	26.61	300	5.17	33.93	26.83	123	0.62
300	5.17	33.93	26.83	400	4.91	34.02	26.93	113	0.74
400	4.91	34.02	26.93						

S46

HMCS CEDARWOOD; July 25, 1951; 1400 GCT; 52°18'N, 132°41'W; sounding, missing; wind, 290°, force 1; weather, cloudy; sea, smooth.

0	13.90	32.24	24.10	0	13.90	32.24	24.10	382	0.00
10	13.82	32.32	24.18	10	13.82	32.32	24.18	375	0.04
20	10.28	32.34	24.85	20	10.28	32.34	24.85	311	0.07
30	8.35	32.38	25.19	30	8.35	32.38	25.19	279	0.10
40	7.19	32.43	25.39	50	6.63	32.53	25.55	244	0.15
50	6.63	32.53	25.55	75	5.96	32.65	25.73	227	0.21
75	5.96	32.65	25.73	100	6.06	32.95	25.94	207	0.27
100	6.06	32.95	25.94	150	6.32	33.70	26.51	153	0.36
125	6.36	33.45	26.31	200	6.05	33.89	26.69	136	0.43
150	6.32	33.70	26.51	250	5.70	33.92	26.76	129	0.50
200	6.05	33.89	26.69	300	5.41	33.96	26.83	123	0.56
300	5.41	33.96	26.83	400	5.05	34.05	26.94	112	0.68
400	5.05	34.05	26.94	500	4.68	34.13	27.04	103	0.80
600	4.34	34.20	27.14	600	4.34	34.20	27.14	93	0.90
800	3.78	34.29	27.27	800	3.78	34.29	27.27	81	1.09
1000	3.33	34.37	27.37	1000	3.33	34.37	27.37	72	1.26
1200	2.93	34.41	27.44	1200	2.93	34.41	27.44	65	1.41

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S47 HMCS CEDARWOOD; July 25, 1951; 1800 GCT; 52°18'N, 133°13'W; sounding, missing; wind, 320°, force 1; weather, cloudy; sea, calm.

2	13.96	32.10	23.98	0	(13.96)	(32.10)	(23.98)	(394)	(0.00)
10	13.90	32.12	24.01	10	13.90	32.12	24.01	391	0.04
20	11.30	32.15	24.53	20	11.30	32.15	24.53	341	0.08
30	10.77	32.15	24.62	30	10.77	32.15	24.62	333	0.11
40	9.09	32.21	24.94	50	7.40	32.29	25.26	272	0.17
50	7.40	32.29	25.26	75	6.50	32.45	25.50	249	0.24
75	6.50	32.45	25.50	100	6.16	32.65	25.70	230	0.30
100	6.16	32.65	25.70	150	6.62	33.50	26.31	172	0.40
125	6.44	33.02	25.96	200	6.47	33.82	26.58	146	0.48
150	6.62	33.50	26.31	250	6.07	33.92	26.71	134	0.55
200	6.47	33.82	26.58	300	5.72	33.98	26.80	126	0.62
300	5.72	33.98	26.80	400	5.18	34.00	26.88	118	0.74
400	5.18	34.00	26.88						

S48 HMCS CEDARWOOD; July 25, 1951; 2100 GCT; 52°38'N, 133°24'W; sounding, missing; wind, 330°, force 1; weather, overcast; sea, calm.

2	14.02	32.12	23.98	0	(14.02)	(32.12)	(23.98)	(394)	(0.00)
10	13.97	32.12	23.99	10	13.97	32.12	23.99	393	0.04
20	11.71	32.12	24.43	20	11.71	32.12	24.43	351	0.08
30	11.21	32.17	24.56	30	11.21	32.17	24.56	339	0.11
40	10.53	32.19	24.69	50	8.85	32.19	24.97	300	0.18
50	8.85	32.19	24.97	75	6.73	32.45	25.47	252	0.24
75	6.73	32.45	25.47	100	6.08	32.62	25.69	231	0.30
100	6.08	32.62	25.69	150	6.22	33.23	26.15	187	0.41
125	6.22	32.95	25.93	200	6.23	33.69	26.51	153	0.50
150	6.22	33.23	26.15	250	5.93	33.81	26.64	141	0.57
200	6.23	33.69	26.51	300	5.67	33.91	26.75	130	0.64
300	5.67	33.91	26.75	400	5.25	34.02	26.89	117	0.77
400	5.25	34.02	26.89						

S49 HMCS CEDARWOOD; July 26, 1951; 0000 GCT; 52°58'N, 133°35'W; sounding, missing; wind, 350°, force 2; weather, overcast; sea, smooth.

2	14.16	32.17	23.99	0	(14.16)	(32.17)	(23.99)	(393)	(0.00)
10	12.13	32.17	24.39	10	12.13	32.17	24.39	355	0.04
20	11.84	32.17	24.45	20	11.84	32.17	24.45	349	0.07
30	10.50	32.29	24.78	30	10.50	32.29	24.78	318	0.11
40	8.64	32.45	25.20	50	7.38	32.55	25.46	253	0.16
50	7.38	32.55	25.46	75	7.41	32.64	25.53	246	0.23
75	7.41	32.64	25.53	100	5.56	32.72	25.83	218	0.28
100	5.56	32.72	25.83	150	6.21	33.84	26.63	142	0.38
125	5.91	33.10	26.09	200	6.06	33.89	26.69	136	0.44
150	6.21	33.84	26.63	250	5.67	33.90	26.75	130	0.51
200	6.06	33.89	26.69	300	5.36	33.93	26.81	125	0.58
300	5.36	33.93	26.81	400	5.00	34.03	26.93	113	0.70
400	5.00	34.03	26.93						

S50 HMCS CEDARWOOD; July 26, 1951; 0400 GCT; 53°00'N, 133°09'W; sounding, 2926 m; wind, 320°, force 1; weather, overcast; sea, smooth.

2	13.78	32.15	24.05	0	(13.78)	(32.15)	(24.05)	(387)	(0.00)
10	13.77	32.15	24.06	10	13.77	32.15	24.06	386	0.04
20	12.30	32.19	24.38	20	12.30	32.19	24.38	356	0.08
30	10.29	32.26	24.79	30	10.29	32.26	24.79	317	0.11
40	8.78	32.46	25.19	50	6.84	32.43	25.44	255	0.17
50	6.84	32.43	25.44	75	5.53	32.62	25.75	225	0.23
75	5.53	32.62	25.75	100	5.55	32.86	25.94	207	0.28
100	5.55	32.86	25.94	150	6.08	33.43	26.33	170	0.38
125	6.14	33.33	26.24	200	5.99	33.60	26.47	157	0.46
150	6.08	33.43	26.33	250	5.99	33.73	26.57	148	0.54
200	5.99	33.60	26.47	300	5.86	33.84	26.68	137	0.61
300	5.86	33.84	26.68	400	5.20	33.98	26.87	119	0.74
400	5.20	33.98	26.87						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S51

HMCS CEDARWOOD; July 26, 1951; 0700 GCT; 53°11'N, 132°44'W; sounding, 457 m; wind, calm; weather, cloudy; sea, calm.

2	12.16	32.29	24.48	0	(12.16)	(32.29)	(24.48)	(346)	(0.00)
10	10.58	32.31	24.78	10	10.58	32.31	24.78	318	0.03
20	9.58	32.34	24.97	20	9.58	32.34	24.97	300	0.06
30	8.55	32.48	25.24	30	8.55	32.48	25.24	274	0.09
40	7.80	32.50	25.36	50	7.57	32.52	25.41	258	0.15
50	7.57	32.52	25.41	75	6.49	32.65	25.66	234	0.21
75	6.49	32.65	25.66	100	6.11	33.17	26.12	190	0.26
100	6.11	33.17	26.12	150	6.21	33.70	26.52	152	0.35
125	6.29	33.60	26.43	200	6.08	33.77	26.59	146	0.42
150	6.21	33.70	26.52	250	5.74	33.87	26.71	134	0.49
200	6.08	33.77	26.59	300	5.47	33.93	26.79	127	0.56
300	5.47	33.93	26.79	400	5.18	33.96	26.85	121	0.69
400	5.18	33.96	26.85						

S52

HMCS CEDARWOOD; July 26, 1951; 1200 GCT; 53°37'N, 133°08'W; sounding, 237 m; wind, missing; weather, cloudy; sea, smooth.

2	11.85	32.17	24.44	0	(11.85)	(32.17)	(24.44)	(350)	(0.00)
10	11.50	32.17	24.51	10	11.50	32.17	24.51	343	0.04
20	11.00	32.19	24.61	20	11.00	32.19	24.61	334	0.07
30	9.33	32.34	25.01	30	9.33	32.34	25.01	296	0.10
40	7.62	32.41	25.32	50	7.30	32.45	25.39	260	0.16
50	7.30	32.45	25.39	75	6.07	32.81	25.84	217	0.22
75	6.07	32.81	25.84	100	6.14	33.12	26.07	195	0.27
100	6.14	33.12	26.07	150	6.06	33.60	26.46	158	0.36
125	6.23	33.38	26.27	200	5.85	33.82	26.66	139	0.43
150	6.06	33.60	26.46						
200	5.85	33.82	26.66						

S53

HMCS CEDARWOOD; July 26, 1951; 1400 GCT; 53°37'N, 133°38'W; sounding, missing; wind, missing; weather, overcast; sea, smooth.

2	13.85	32.15	24.04	0	(13.85)	(32.15)	(24.04)	(388)	(0.00)
10	13.79	32.15	24.05	10	13.79	32.15	24.05	387	0.04
20	11.54	32.17	24.50	20	11.54	32.17	24.50	344	0.08
30	10.56	32.24	24.73	30	10.56	32.24	24.73	322	0.11
40	8.90	32.36	25.09	50	7.06	32.46	25.43	256	0.17
50	7.06	32.46	25.43	75	6.10	32.57	25.65	235	0.23
75	6.10	32.57	25.65	100	5.71	32.84	25.91	210	0.28
100	5.71	32.84	25.91	150	6.42	33.64	26.45	159	0.38
125	6.20	33.36	26.25	200	6.06	33.88	26.68	137	0.45
150	6.42	33.64	26.45	250	5.51	33.94	26.80	126	0.52
200	6.06	33.88	26.68	300	5.13	33.98	26.87	119	0.58
300	5.13	33.98	26.87	400	4.86	34.02	26.94	112	0.70
400	4.86	34.02	26.94						

S54

HMCS CEDARWOOD; July 26, 1951; 1700 GCT; 53°37'N, 134°07'W; sounding, missing; wind, 300°, force 2; weather, overcast; sea, smooth.

2	14.00	31.90	23.82	0	(14.00)	(31.90)	(23.82)	(409)	(0.00)
10	13.96	31.93	23.85	10	13.96	31.93	23.85	406	0.04
20	8.84	32.29	25.05	20	8.84	32.29	25.05	292	0.08
30	7.99	32.41	25.27	30	7.99	32.41	25.27	271	0.10
40	6.97	32.52	25.49	50	6.65	32.58	25.58	242	0.16
50	6.65	32.58	25.58	75	5.85	32.76	25.83	218	0.21
75	5.85	32.76	25.83	100	5.98	33.17	26.13	189	0.26
100	5.98	33.17	26.13	150	6.08	33.77	26.59	146	0.35
125	6.13	33.52	26.39	200	5.77	33.86	26.70	135	0.42
150	6.08	33.77	26.59	300	5.13	33.94	26.84	122	0.55
200	5.77	33.86	26.70	400	4.71	34.02	26.95	111	0.67
300	5.13	33.94	26.84						
400	4.71	34.02	26.95						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

S55 HMCS CEDARWOOD; July 26, 1951; 2000 GCT; 53°56'N, 134°07'W; sounding, missing; wind, 320°, force 4; weather, moderate to thick freezing drizzle; sea, smooth.

2	12.37	31.78	24.04	0	(12.37)	(31.78)	(24.04)	(388)	(0.00)
10	12.04	31.84	24.15	10	12.04	31.84	24.15	378	0.04
20	9.39	31.95	24.69	20	9.39	31.95	24.69	326	0.07
30	8.13	32.10	25.00	30	8.13	32.10	25.00	297	0.10
40	7.57	32.26	25.21	50	6.90	32.45	25.45	254	0.16
50	6.90	32.45	25.45	75	6.32	32.78	25.78	222	0.22
75	6.32	32.78	25.78	100	6.13	33.26	26.18	184	0.27
100	6.13	33.26	26.18	150	6.14	33.76	26.58	146	0.35
125	6.26	33.64	26.47	200	5.87	33.88	26.71	134	0.42
150	6.14	33.76	26.58	250	5.59	33.92	26.77	128	0.49
200	5.87	33.88	26.71	300	5.31	33.96	26.84	122	0.56
300	5.31	33.96	26.84	400	4.77	34.05	26.97	110	0.68
400	4.77	34.05	26.97						

S56 HMCS CEDARWOOD; July 26, 1951; 2300 GCT; 54°13'N, 134°07'W; sounding, missing; wind, 340°, force 2; weather, overcast; sea, smooth.

0	(12.40)	(31.79)	(24.05)	0	(12.40)	(31.79)	(24.05)	(387)	(0.00)
10	11.48	31.91	24.31	10	11.48	31.91	24.31	362	0.04
20	9.61	32.15	24.82	20	9.61	32.15	24.82	314	0.07
30	8.48	32.22	25.05	30	8.48	32.22	25.05	292	0.10
40	7.25	32.34	25.31	50	6.59	32.52	25.54	245	0.16
50	6.59	32.52	25.54	75	6.16	32.91	25.91	210	0.21
75	6.16	32.91	25.91	100	5.94	33.24	26.19	184	0.26
100	5.94	33.24	26.19	150	6.14	33.70	26.53	151	0.35
125	6.19	33.52	26.38	200	5.96	33.86	26.68	137	0.42
150	6.14	33.70	26.53	250	5.57	33.91	26.77	128	0.49
200	5.96	33.86	26.68	300	5.25	33.96	26.84	122	0.55
300	5.25	33.96	26.84	400	4.84	34.06	26.97	110	0.67
400	4.84	34.06	26.97	500	4.53	34.12	27.05	102	0.78
600	4.25	34.17	27.12	600	4.25	34.17	27.12	95	0.88
800	3.80	34.22	27.21	800	3.80	34.22	27.21	87	1.08
1000	3.52	34.36	27.35	1000	3.52	34.36	27.35	74	1.25
1200	2.90	34.37	27.41	1200	2.90	34.37	27.41	68	1.41

S57 HMCS CEDARWOOD; July 27, 1951; 0200 GCT; 54°13'N, 133°38'W; sounding, 256 m; wind, 320°, force 1; weather, overcast; sea, smooth.

2	11.65	31.86	24.24	0	(11.65)	(31.86)	(24.24)	(369)	(0.00)
10	10.68	31.95	24.48	10	10.68	31.95	24.48	346	0.04
20	10.53	31.96	24.51	20	10.53	31.96	24.51	343	0.07
30	9.82	32.02	24.68	30	9.82	32.02	24.68	327	0.10
40	7.73	32.24	25.17	50	7.12	32.43	25.40	259	0.16
50	7.12	32.43	25.40	75	6.50	32.76	25.74	226	0.22
75	6.50	32.76	25.74	100	6.55	32.93	25.87	214	0.28
100	6.55	32.93	25.87	150	5.94	33.81	26.64	141	0.37
125	6.04	33.76	26.59	200	5.77	33.86	26.70	135	0.44
150	5.94	33.81	26.64						
200	5.77	33.86	26.70						

S58 HMCS CEDARWOOD; July 27, 1951; 0400 GCT; 54°16'N, 133°09'W; sounding, 228 m; wind, 320°, force 1; weather, overcast; sea, missing.

2	11.01	32.21	24.63	0	(11.01)	(32.21)	(24.63)	(332)	(0.00)
10	10.33	32.31	24.82	10	10.33	32.31	24.82	314	0.03
20	9.24	32.40	25.07	20	9.24	32.40	25.07	290	0.06
30	8.52	32.41	25.19	30	8.52	32.41	25.19	279	0.09
40	7.77	32.55	25.41	50	7.38	32.65	25.54	245	0.14
50	7.38	32.65	25.54	75	6.67	32.90	25.83	218	0.20
75	6.67	32.90	25.83	100	6.14	33.17	26.11	191	0.25
100	6.14	33.17	26.11	150	5.65	33.67	26.57	148	0.34
125	5.87	33.43	26.35	200	5.59	33.88	26.74		0.41
150	5.65	33.67	26.57						
200	5.59	33.88	26.74						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

D1

HMCS CEDARWOOD; July 27, 1951; 0700 GCT; 54°26'N, 132°57'W; sounding, 292 m; wind, calm; weather, cloudy; sea, calm.

2	10.01	31.43	24.19	0	(10.01)	(31.43)	(24.19)	(374)	(0.00)
10	9.25	31.57	24.42	10	9.25	31.57	24.42	352	0.04
20	7.55	31.98	24.99	20	7.55	31.98	24.99	298	0.07
30	6.71	32.64	25.62	30	6.71	32.64	25.62	238	0.10
40	6.43	32.76	25.75	50	6.54	32.93	25.87	214	0.14
50	6.54	32.93	25.87	75	6.42	33.14	26.05	197	0.19
75	6.42	33.14	26.05	100	6.24	33.24	26.16	186	0.24
100	6.24	33.24	26.16	150	5.93	33.46	26.37	166	0.33
125	5.96	33.40	26.32	200	5.53	33.74	26.64	141	0.41
150	5.93	33.46	26.37	250	5.47	33.79	26.68	137	0.48
200	5.53	33.74	26.64						
250	5.47	33.79	26.68						

D2

HMCS CEDARWOOD; July 27, 1951; 0800 GCT; 54°36'N, 132°46'W; sounding, 146 m; wind, calm; weather, fog; sea, calm.

2	9.71	31.46	24.26	0	(9.71)	(31.46)	(24.26)	(367)	(0.00)
10	8.47	31.72	24.66	10	8.47	31.72	24.66	329	0.04
20	8.24	31.72	24.69	20	8.24	31.72	24.69	326	0.07
30	7.84	31.98	24.95	30	7.84	31.98	24.95	301	0.10
40	7.55	32.19	25.16	50	7.11	32.41	25.39	260	0.16
50	7.11	32.41	25.39	75	6.41	32.86	25.83	218	0.22
75	6.41	32.86	25.83	100	6.07	33.10	26.07	195	0.27
100	6.07	33.10	26.07						
125	5.84	33.38	26.32						

D3

HMCS CEDARWOOD; July 27, 1951; 1100 GCT; 54°24'N, 132°31'W; sounding, 256 m; wind, 340°, force 2; weather, cloudy; sea, calm.

2	10.99	30.84	23.57	0	(10.99)	(30.84)	(23.57)	(433)	(0.00)
10	9.55	31.95	24.67	10	9.55	31.95	24.67	328	0.04
20	8.62	32.14	24.96	20	8.62	32.14	24.96	300	0.07
30	7.90	32.33	25.22	30	7.90	32.33	25.22	276	0.10
40	7.09	32.50	25.46	50	7.06	32.53	25.49	250	0.15
50	7.06	32.53	25.49	75	5.83	33.19	26.17	185	0.21
75	5.83	33.19	26.17	100	5.71	33.52	26.44	160	0.25
100	5.71	33.52	26.44	150	5.61	33.67	26.57	148	0.33
125	5.65	33.50	26.43	200	5.52				
150	5.61	33.67	26.57						
200	5.52	-	-						

D4

HMCS CEDARWOOD; July 27, 1951; 1300 GCT; 54°13'N, 132°20'W; sounding, 129 m; wind, 270°, force 1; weather, cloudy; sea, smooth.

2	10.07	31.78	24.45	0	(10.07)	(31.78)	(24.45)	(349)	(0.00)
10	9.49	31.88	24.62	10	9.49	31.88	24.62	333	0.03
20	8.86	32.10	24.89	20	8.86	32.10	24.89	307	0.07
30	8.65	32.14	24.96	30	8.65	32.14	24.96	300	0.10
40	8.54	32.21	25.03	50	8.16	32.31	25.16	281	0.16
50	8.16	32.31	25.16	75	7.22	32.58	25.51	248	0.22
75	7.22	32.58	25.51	100	5.93	33.10	26.08	194	0.28
100	5.93	33.10	26.08						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

D5

HMCS CEDARWOOD; July 27, 1951; 1500 GCT; 54°24'N, 132°08'W; sounding, 292 m; wind, 270°, force 1; weather, cloudy; sea, smooth.

2	11.45	30.50	23.22	0	(11.45)	(30.50)	(23.22)	(466)	(0.00)
10	9.21	31.29	24.21	10	9.21	31.29	24.21	372	0.04
20	8.08	31.69	24.69	20	8.08	31.69	24.69	326	0.08
30	7.26	32.19	25.20	30	7.26	32.19	25.20	278	0.11
40	6.79	32.43	25.45	50	6.33	32.69	25.71	229	0.16
50	6.33	32.69	25.71	75	6.00	33.00	26.00	202	0.21
75	6.00	33.00	26.00	100	5.81	33.36	26.30	173	0.26
100	5.81	33.36	26.30	150	5.61	33.67	26.57	148	0.34
125	5.75	33.57	26.48	200	5.40	33.84	26.73	132	0.41
150	5.61	33.67	26.57						
200	5.40	33.84	26.73						

D6

HMCS CEDARWOOD; July 27, 1951; 1700 GCT; 54°35'N, 131°47'W; sounding, 320 m; wind, 220°, force 1; weather, overcast; sea, calm.

2	11.05	31.24	23.87	0	(11.05)	(31.24)	(23.87)	(404)	(0.00)
10	9.42	31.60	24.42	10	9.42	31.60	24.42	352	0.04
20	7.91	32.02	24.97	20	7.91	32.02	24.97	300	0.07
30	7.42	32.19	25.17	30	7.42	32.19	25.17	280	0.10
40	6.90	32.41	25.42	50	6.16	32.88	25.88	213	0.15
50	6.16	32.88	25.88	75	5.77	33.17	26.16	186	0.20
75	5.77	33.17	26.16	100	5.79	33.40	26.34	169	0.24
100	5.79	33.40	26.34	150	5.61	33.60	26.52	152	0.32
125	5.70	33.52	26.44	200	5.55	33.62	26.54	150	0.40
150	5.61	33.60	26.52	250	5.49	33.74	26.64	141	0.48
200	5.55	33.62	26.54						
250	5.49	33.74	26.64						

D7

HMCS CEDARWOOD; August 1, 1951; 0100 GCT; 54°23'N, 131°45'W; sounding, 95 m; wind, 320°, force 1; weather, cloudy; sea, missing.

2	11.34	31.24	23.82	0	(11.34)	(31.24)	(23.82)	(409)	(0.00)
10	9.66	31.78	24.52	10	9.66	31.78	24.52	342	0.04
20	8.30	32.14	25.01	20	8.30	32.14	25.01	296	0.07
30	7.58	32.41	25.32	30	7.58	32.41	25.32	266	0.10
40	6.97	32.53	25.50	50	6.86	32.69	25.64	249	0.15
50	6.86	32.69	25.64	75	6.45	32.84	25.81	220	0.20
75	6.45	32.84	25.81						

D8

HMCS CEDARWOOD; August 1, 1951; 0300 GCT; 54°28'N, 131°22'W; sounding, 182 m; wind, 290°, force 1; weather, cloudy; sea, smooth.

2	12.36	31.21	23.61	0	(12.36)	(31.21)	(23.61)	(429)	(0.00)
10	10.78	31.28	23.94	10	10.78	31.28	23.94	398	0.04
20	9.31	31.52	24.37	20	9.31	31.52	24.37	357	0.08
30	7.79	31.95	24.93	30	7.79	31.95	24.93	303	0.11
40	7.38	32.21	25.20	50	6.78	32.52	25.52	247	0.17
50	6.78	32.52	25.52	75	6.08	32.98	25.97	204	0.22
75	6.08	32.98	25.97	100	5.93	33.19	26.15	187	0.27
100	5.93	33.19	26.15	150	5.71	33.46	26.39	164	0.36
125	5.89	33.26	26.21						
150	5.71	33.46	26.39						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

D9

HMCS CEDARWOOD; August 1, 1951; 0600 GCT; 54°34'N, 131°47'W; sounding, 310 m; wind, 270°, force 3; weather, cloudy; sea, smooth.

2	12.75	30.62	23.08	0	(12.75)	(30.62)	(23.08)	(480)	(0.00)
10	11.85	30.79	23.38	10	11.85	30.79	23.38	451	0.05
20	8.71	31.67	24.58	20	8.71	31.67	24.58	337	0.09
30	7.32	32.12	25.13	30	7.32	32.12	25.13	284	0.12
40	6.85	32.36	25.38	50	6.46	32.55	25.58	242	0.17
50	6.46	32.55	25.58	75	6.00	33.02	26.01	201	0.22
75	6.00	33.02	26.01	100	5.84	33.33	26.28	175	0.27
100	5.84	33.33	26.28	150	5.58	33.58	26.50	154	0.36
125	5.71	33.48	26.41	200	5.54	33.68	26.59	146	0.43
150	5.58	33.58	26.50	250	5.46	33.76	26.66	139	0.50
200	5.54	33.68	26.59						
250	5.46	33.76	26.66						

D10

HMCS CEDARWOOD; August 1, 1951; 0800 GCT; 54°24'N, 132°01'W; sounding, 182 m; wind, 270°, force 3; weather, cloudy; sea, smooth.

2	11.90	31.02	23.54	0	(11.90)	(31.02)	(23.54)	(436)	(0.00)
10	9.26	31.62	24.46	10	9.26	31.62	24.46	348	0.04
20	7.77	32.05	25.02	20	7.77	32.05	25.02	295	0.07
30	7.41	32.19	25.18	30	7.41	32.19	25.18	280	0.10
40	6.89	32.41	25.42	50	6.45	32.60	25.62	238	0.15
50	6.45	32.60	25.62	75	6.10	33.05	26.02	200	0.21
75	6.10	33.05	26.02	100	5.77	33.38	26.32	171	0.25
100	5.77	33.38	26.32	150	5.56	33.60	26.52	152	0.34
125	5.66	33.46	26.40						
150	5.56	33.60	26.52						

D11

HMCS CEDARWOOD; August 1, 1951; 1100 GCT; 54°13'N, 132°15'W; sounding, 128 m; wind, calm; weather, overcast; sea, calm.

2	11.69	31.53	23.98	0	(11.69)	(31.53)	(23.98)	(394)	(0.00)
10	10.57	31.81	24.39	10	10.57	31.81	24.39	355	0.04
20	8.83	32.12	24.91	20	8.83	32.12	24.91	305	0.07
30	8.24	32.28	25.13	30	8.24	32.28	25.13	284	0.10
40	7.56	32.46	25.37	50	7.33	32.60	25.51	248	0.15
50	7.33	32.60	25.51	75	6.10	33.00	25.98	204	0.21
75	6.10	33.00	25.98	100	5.88	33.27	26.22	181	0.26
100	5.88	33.27	26.22						

D12

HMCS CEDARWOOD; August 1, 1951; 1300 GCT; 54°25'N, 132°31'W; sounding, 246 m; wind, calm; weather, overcast; sea, calm.

2	13.14	29.33	22.01	0	(13.14)	(29.33)	(22.01)	(582)	(0.00)
10	9.13	31.50	24.38	10	9.13	31.50	24.38	356	0.05
20	8.16	31.90	24.84	20	8.16	31.90	24.84	312	0.08
30	7.22	32.24	25.24	30	7.22	32.24	25.24	274	0.11
40	6.64	32.52	25.54	50	6.37	32.69	25.71	229	0.16
50	6.37	32.69	25.71	75	6.02	32.96	25.96	205	0.22
75	6.02	32.96	25.96	100	5.89	33.18	26.15	187	0.26
100	5.89	33.18	26.15	150	5.80	33.46	26.38	166	0.35
125	5.77	33.36	26.31	200	5.67	33.69	26.58	146	0.43
150	5.80	33.46	26.38						
200	5.67	33.69	26.58						

D13

HMCS CEDARWOOD; August 1, 1951; 1500 GCT; 54°36'N, 132°46'W; sounding, 106 m; wind, calm; weather, cloudy; sea, calm.

2	12.44	29.33	22.14	0	(12.44)	(29.33)	(22.14)	(570)	(0.00)
10	10.16	30.90	23.75	10	10.16	30.90	23.75	416	0.05
20	8.45	31.59	24.56	20	8.45	31.59	24.56	339	0.09
30	7.54	31.88	24.91	30	7.54	31.88	24.91	305	0.12
40	7.19	32.05	25.10	50	7.01	32.14	25.19	279	0.18
50	7.01	32.14	25.19	75	6.47	32.65	25.66	234	0.24
75	6.47	32.65	25.66						

OBSERVED			COMPUTED		
Z	T	S	σ_t	δ	ΔD
m	°C	‰	g/L	cl/ton	dyn m

G1

HMCS CEDARWOOD; August 1, 1951; 1634 GCT; 54°18'N, 133°06'W; sounding, 230 fm; wind, 090°, force 3; weather, drizzle; sea, smooth; wire angle, 00°.[a)]

G2

0	11.6	31.79	24.19	374	0.00
10	10.96	32.24	24.65	330	0.04
20	9.22	32.36	25.04	294	0.07
30	8.45	32.46	25.24	274	0.09
40	6.70	32.52	25.53	247	0.12
50	6.41	32.74	25.73	228	0.14
75	6.21	33.00	25.96	206	0.20
100	6.09	33.17	26.11	192	0.25
125	5.96	33.38	26.29	176	0.29

HMCS CEDARWOOD; August 1, 1951; 2237, 2302 GCT; 54°15'N, 134°02'W; sounding, missing; wind, 160°, force 3; weather, overcast; sea, slight; wire angle, 04°, 04°.

0	13.3	31.88	23.94	398	0.00
10	13.08	31.88	23.98	394	0.04
20	9.73	32.05	24.71	325	0.08
30	8.75	32.24	25.02	296	0.11
40	7.79	32.40	25.28	271	0.13
50	7.51	32.41	25.33	266	0.16
75	6.22	32.84	25.84	218	0.22
100	5.98	33.19	26.14	190	0.27
125	6.26	33.53	26.38	168	0.32
150	6.22	33.62	26.45	161	0.36
200	5.84	33.84	26.67	141	0.43
300	5.16	33.98	26.86	124	0.57

G3

HMCS CEDARWOOD; August 2, 1951; 0434 GCT; 54°13'N, 135°03'W; sounding, missing; wind, 180°, force 3; weather, overcast; sea, slight; wire angle, 04°.

G4

0	14.1	32.31	24.13	380	0.00
10	13.96	32.29	24.12	381	0.04
20	12.88	32.38	24.41	354	0.07
30	10.13	32.43	24.94	303	0.11
40	9.31	32.43	25.08	290	0.14
50	8.71	32.45	25.19	280	0.17
75	5.40	32.58	25.73	228	0.23
100	4.37	32.71	25.94	208	0.28
125	4.75	33.03	26.16	188	0.33
150	6.17	33.64	26.47	159	0.38
200	5.87	33.79	26.63	144	0.45
300	5.22	33.93	26.82	127	0.59
400	4.78	33.96	26.89	122	0.71
600	3.95	34.10	27.09	104	0.94
800	3.49	34.22	27.23	91	1.13
1000	3.27	34.31	27.32	84	1.31
1200	2.83	34.39	27.43	74	1.47

HMCS CEDARWOOD; August 2, 1951; 1036 GCT; 54°10'N, 136°15'W; sounding, missing; wind, 225°, force 4; weather, clear; sea, slight; wire angle, 01°.

0	14.0	32.24	24.08	385	0.00
10	13.94	32.19	24.05	388	0.04
20	12.48	32.24	24.38	356	0.08
30	10.48	32.26	24.74	322	0.11
40	9.20	32.29	24.98	300	0.14
50	7.90	32.36	25.24	275	0.17
75	6.01	32.48	25.58	242	0.23
100	5.46	32.64	25.77	225	0.29
125	5.71	32.95	25.99	204	0.35
150	6.22	33.45	26.32	173	0.39
200	5.98	33.77	26.60	147	0.47
300	5.29	33.88	26.77	132	0.61
400	4.76	33.96	26.90	121	0.74
600	4.01	34.09	27.08	104	0.96
800	3.49	34.20	27.22	92	1.16
1000	3.32	34.34	27.34	82	1.34
1200	2.86	34.37	27.41	76	1.49

G5

HMCS CEDARWOOD; August 2, 1951; 1634 GCT; 54°07'N, 137°21'W; sounding, missing; wind, 200°, force 2; weather, partly cloudy; sea, slight; wire angle, 04°.

G6

0	13.75	32.22	24.11	382	0.00
10	13.62	32.21	24.13	380	0.04
20	13.57	32.21	24.15	378	0.08
30	10.75	32.21	24.67	329	0.11
40	8.37	32.26	25.09	289	0.14
50	6.81	32.26	25.30	269	0.17
75	5.92	32.26	25.42	258	0.24
100	5.86	32.33	25.50	250	0.30
125	5.95	32.53	25.63	238	0.36
150	6.36	32.90	25.86	217	0.42
200	6.57	33.50	26.31	175	0.52
300	5.96	33.88	26.69	140	0.67
400	5.31	33.96	26.83	128	0.81
600	4.60	34.10	27.02	111	1.05
800	4.07	34.19	27.16	99	1.26
1000	3.63	34.27	27.26	90	1.44

HMCS CEDARWOOD; August 2, 1951; 2242 GCT; 54°04'N, 138°23'W; sounding, missing; wind, 200°, force 6; weather, overcast; sea, moderate; wire angle, 07°.

0	13.9	32.00	23.92	400	0.00
10	13.82	32.07	24.00	392	0.04
20	12.24	32.14	24.35	359	0.08
30	9.84	32.14	24.76	320	0.11
40	8.59	32.33	25.12	286	0.14
50	7.62	32.38	25.30	269	0.17
75	5.64	32.53	25.67	234	0.23
100	5.63	32.76	25.86	216	0.29
125	6.14	33.29	26.20	184	0.34
150	6.14	33.62	26.46	160	0.38

a) The vessel was maneuvered on station to maintain as nearly as possible a wire angle of zero degrees until the messenger reached the bottom. As a result, the observed depths deviated so little from the desired standard depths for this station and those that follow (pp. 582 to 590) that interpolated values were not obtained and dynamic calculations were carried out with reference to observed depths.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

HMCS CEDARWOOD; August 3, 1951; 0435 GCT; 53°58'N, 138°56'W; sounding, missing; wind, 180°, force 5; weather, partly cloudy; sea, moderate; wire angle, 01°.

0	13.6	32.46	24.33	361	0.00
10	13.47	32.45	24.35	359	0.04
20	10.48	32.46	24.91	306	0.07
30	8.52	32.53	25.28	271	0.10
40	7.10	32.53	25.49	251	0.12
50	6.00	32.55	25.64	237	0.15
75	4.82	32.58	25.80	222	0.21
100	4.20	32.76	26.00	203	0.26
125	4.94	33.38	26.41	164	0.30
150	5.79	33.70	26.57	150	0.34
200	5.44	33.84	26.72	136	0.42
300	4.60	33.91	26.87	122	0.54
400	4.18	33.98	26.97	113	0.66
600	3.75	34.17	27.17	96	0.87
800	3.36	34.25	27.27	87	1.05
1000	3.02	34.36	27.40	76	1.22

HMCS CEDARWOOD; August 3, 1951; 1659, 1725 GCT; 53°11'N, 140°32'W; sounding, missing; wind, calm; weather, partly cloudy; sea, calm; wire angle, 01°, 01°.

0	13.4	32.53	24.43	351	0.00
5	13.33	32.57	24.46	349	0.02
15	13.3	32.46	24.38	356	0.05
25	8.57	32.55	25.29	270	0.08
35	7.35	32.65	25.55	245	0.11
55	4.91	32.67	25.86	216	0.16
80	4.18	32.74	25.99	203	0.21
105	4.51	33.03	26.19	184	0.26
125	5.16	33.52	26.50	156	0.29
150	5.49	33.72	26.62	145	0.33
200	4.24	33.77	26.80	128	0.40
300	3.90	33.94	26.98	111	0.52
400	4.20	34.10	27.06	105	0.62
600	3.57	34.19	27.20	93	0.82
800	3.28	34.31	27.33	82	1.00
1000	3.00	34.41	27.44	72	1.15
1200	2.70	34.44	27.48	69	1.29

HMCS CEDARWOOD; August 4, 1951; 1034 GCT; 52°17'N, 139°50'W; sounding, missing; wind, 315°, force 2; weather, partly cloudy; sea, smooth; wire angle, 00°.

0	13.9	32.55	24.34	360	0.00
10	13.79	32.53	24.34	360	0.04
20	13.55	32.48	24.35	359	0.07
30	9.70	32.55	25.11	287	0.10
40	8.45	32.57	25.32	267	0.13
50	7.37	32.57	25.48	252	0.16
75	4.78	32.58	25.80	222	0.22
100	4.48	32.81	26.01	202	0.27
125	4.42	33.36	26.45	160	0.32
150	4.34	33.60	26.66	140	0.35
200	4.06	33.76	26.81	127	0.42
300	3.95	33.93	26.96	113	0.54
400	3.98	34.05	27.05	106	0.65
600	3.63	34.19	27.19	94	0.85
800	3.26	34.34	27.35	80	1.02
1000	2.92	34.37	27.41	75	1.18

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

POG

C-2

HMCS CEDARWOOD; August 3, 1951; 1033 GCT; 53°41'N, 139°45'W; sounding, missing; wind, 135°, force 2; weather, cloudy; sea, slight; wire angle, 02°.

G7

G8

0	13.65	32.48	24.33	361	0.00
10	13.54	32.46	24.33	361	0.04
20	9.45	32.57	25.17	281	0.07
30	7.31	32.57	25.49	251	0.09
40	5.83	32.58	25.68	233	0.12
50	4.68	32.60	25.83	218	0.14
75	4.15	32.72	25.98	204	0.19
100	3.99	32.93	26.16	187	0.24
125	5.14	33.46	26.46	160	0.29
150	5.39	33.72	26.63	144	0.32
200	4.99	33.81	26.75	133	0.39
300	3.98	33.86	26.90	119	0.52
400	3.98	33.98	26.99	111	0.63
600	3.79	34.13	27.14	98	0.84
800	3.38	34.27	27.29	86	1.03
1000	3.02	34.31	27.35	80	1.19
1200	2.66	34.41	27.46	71	1.35

HMCS CEDARWOOD; August 4, 1951; 0438 GCT; 52°18'N, 140°57.5'W; sounding, missing; wind, calm; weather, partly cloudy; sea, smooth; wire angle, 00°.

G9

E1

0	14.0	32.40	24.20	373	0.00
10	13.65	32.40	24.27	367	0.04
20	13.29	32.46	24.39	355	0.07
30	8.88	32.52	25.22	276	0.10
40	8.37	32.57	25.34	265	0.13
50	7.62	32.57	25.46	254	0.16
75	5.20	32.57	25.76	225	0.22
100	4.45	32.65	25.89	213	0.27
125	4.57	33.15	26.27	177	0.32
150	4.41	33.58	26.63	143	0.36
200	4.08	33.70	26.76	131	0.43
300	4.05	33.84	26.88	121	0.56
400	3.88	33.98	27.00	110	0.67
600	3.63	34.19	27.19	94	0.88
800	3.23	34.29	27.31	83	1.05
1000	2.95	34.32	27.36	79	1.22
1200	2.64	34.41	27.46	70	1.36

HMCS CEDARWOOD; August 4, 1951; 1652 GCT; 52°15'N, 138°35'W; sounding, missing; wind, 315°, force 2; weather, partly cloudy; sea, calm; wire angle, 03°.

E2

E3

0	14.4	32.46	24.16	377	0.00
10	14.39	32.46	24.16	377	0.04
20	11.52	32.52	24.78	318	0.07
30	9.44	32.58	25.18	280	0.10
40	7.81	32.58	25.42	258	0.13
49	6.98	32.57	25.53	247	0.15
75	5.09	32.62	25.80	222	0.21
100	4.63	32.69	25.90	212	0.27
125	4.69	33.45	26.50	156	0.31
150	5.00	33.60	26.58	148	0.35

E4

HMCS CEDARWOOD; August 4, 1951; 2234 GCT; 52°14'N, 137°38'W; sounding, missing; wind, 290°, force 2; weather, partly cloudy; sea, smooth; wire angle, 04°.

E5

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	14.75	32.19	23.89	403	0.00
10	14.11	32.17	24.00	392	0.04
20	13.97	32.19	24.04	389	0.08
30	11.16	32.21	24.60	336	0.12
40	9.79	32.38	24.96	302	0.15
50	8.20	32.53	25.33	266	0.18
75	5.90	32.55	25.66	235	0.24
100	5.26	32.58	25.75	226	0.30
125	5.87	33.17	26.14	190	0.35
150	5.61	33.58	26.50	156	0.39
200	5.27	33.76	26.68	139	0.46
300	4.86	33.89	26.83	126	0.60
400	4.56	34.02	26.96	115	0.72
600	4.06	34.17	27.14	99	0.93
800	3.55	34.24	27.25	90	1.12
1000	3.15	34.36	27.38	78	1.29

HMCS CEDARWOOD; August 5, 1951; 0435, 0453 GCT; 52°14'N, 136°25'W; sounding, missing; wind, calm; weather, partly cloudy; sea, calm; wire angle, 01°.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	14.9	32.14	23.81	410	0.00
10	14.36	32.12	23.92	400	0.04
20	13.82	32.12	24.02	391	0.08
30	10.42	32.29	24.79	318	0.12
40	8.72	32.31	25.08	290	0.15
50	6.31	32.45	25.52	248	0.17
75	5.60	32.69	25.80	222	0.23
100	5.80	33.15	26.14	190	0.28
125	6.06	33.53	26.40	166	0.33
150	5.98	33.69	26.54	152	0.37
200	5.76	33.86	26.70	138	0.44
300	5.20	33.96	26.85	124	0.57
400	4.86	34.05	26.96	115	0.69
600	4.07	34.15	27.12	101	0.91
800	3.60	34.29	27.28	87	1.09
1000	3.16	34.36	27.38	78	1.26
1200	2.70	34.39	27.44	72	1.41

E6

HMCS CEDARWOOD; August 5, 1951; 1036 GCT; 52°14'N, 135°20'W; sounding, missing; wind, calm; weather, cloudy; sea, calm; wire angle, 05°.

E7

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	14.5	32.22	23.96	396	0.00
10	14.03	32.22	24.06	387	0.04
20	13.92	32.21	24.07	386	0.08
30	10.46	32.29	24.78	318	0.11
40	8.47	32.33	25.14	284	0.14
50	7.68	32.38	25.29	270	0.17
75	5.73	32.58	25.70	231	0.23
100	5.49	32.79	25.89	213	0.29
125	6.06	33.24	26.18	186	0.34
150	6.27	33.65	26.48	158	0.38
200	5.65	33.81	26.68	140	0.46
300	5.36	33.94	26.82	127	0.59
400	4.73	34.05	26.97	114	0.71
600	4.15	34.13	27.09	104	0.93
800	3.69	34.31	27.29	86	1.13
1000	3.21	34.37	27.38	78	1.29

HMCS CEDARWOOD; August 5, 1951; 1638 GCT; 52°17'N, 134°17'W; sounding, missing; wind, calm; weather, cloudy; sea, calm; wire angle, 02°.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	14.8	32.09	23.80	411	0.00
10	14.62	32.09	23.84	408	0.04
20	14.63	32.14	23.87	405	0.08
30	10.76	32.15	24.62	334	0.12
40	9.60	32.15	24.82	315	0.15
50	7.59	32.28	25.22	277	0.18
75	6.31	32.48	25.54	246	0.25
100	6.04	32.62	25.69	232	0.31
125	6.58	33.10	26.00	203	0.36
150	6.70	33.43	26.24	181	0.41
200	6.50	33.77	26.54	153	0.49
300	5.84	33.91	26.73	136	0.64
400	5.34	33.98	26.84	127	0.77
600	4.48	34.10	27.03	110	1.00
800	3.99	34.24	27.20	95	1.21
1000	3.45	34.34	27.33	83	1.39
1200	3.03	34.37	27.40	77	1.55

E8

HMCS CEDARWOOD; August 5, 1951; 2232 GCT; 52°18'N, 133°06'W; sounding, missing; wind, 200°, force 1; weather, missing; sea, calm; wire angle, 00°.

E9

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	15.0	32.10	23.76	415	0.00
10	14.62	32.10	23.84	408	0.04
20	14.67	32.10	23.83	409	0.08
30	14.73	32.12	23.83	409	0.12
40	13.91	32.12	24.00	393	0.16
50	9.10	32.21	24.94	304	0.20
75	6.70	32.41	25.44	256	0.27
100	6.02	32.58	25.66	235	0.33
125	6.11	33.00	25.98	205	0.38
150	6.26	33.48	26.34	172	0.43
200	5.97	33.79	26.62	145	0.51
300	5.37	33.91	26.79	130	0.65
400	4.90	34.00	26.91	120	0.77
600	4.17	34.15	27.10	103	1.00
800	3.68	34.25	27.24	91	1.19
1000	3.31	34.34	27.35	81	1.36
1200	2.86	34.39	27.43	74	1.52

HMCS CEDARWOOD; August 6, 1951; 0437 GCT; 52°19'N, 131°52'W; sounding, missing; wind, calm; weather, partly cloudy; sea, calm; wire angle, 00°.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	15.3	32.12	23.71	420	0.00
10	14.33	32.10	23.90	402	0.04
20	11.91	32.12	24.40	354	0.08
30	10.47	32.19	24.70	326	0.11
40	9.79	32.26	24.87	310	0.14
50	9.04	32.31	25.03	295	0.18
75	7.95	32.52	25.36	264	0.24
100	6.76	32.76	25.71	231	0.31
125	6.71	33.08	25.97	206	0.36
150	6.50	33.22	26.10	194	0.41
200	6.27	33.69	26.50	157	0.50
300	5.61	33.91	26.76	133	0.64
400	5.27	34.00	26.86	125	0.77
600	4.53	34.10	27.03	110	1.01
800	3.91	34.22	27.19	96	1.21
1000	3.46	34.34	27.38	83	1.39
1200	3.01	34.37	27.40	77	1.55

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

POG

C-2

HMCS CEDARWOOD; August 6, 1951; 0728, 0702 GCT; 52°16.5'N, 131°32'W; sounding, 170 fm; wind, calm; weather, cloudy; sea, calm; wire angle, missing, missing.

0	14.2	32.22	24.02	390	0.00
10	11.68	32.22	24.51	344	0.04
20	11.02	32.28	24.68	328	0.07
25	10.98	32.24	24.66	330	0.09
30	9.22	32.31	25.00	297	0.10
40	7.27	32.55	25.48	252	0.13
50	7.20	32.57	25.51	249	0.15
75	6.70	33.15	26.02	201	0.21
100	6.43	33.31	26.18	186	0.26
150	5.90	33.67	26.53	153	0.34
250	5.75	33.79	26.64	144	0.49
350	5.41	33.89	26.76	134	0.63

HMCS CEDARWOOD; August 6, 1951; 1639 GCT; 51°28'N, 130°18'W; sounding, missing; wind, calm; weather, cloudy; sea, calm; wire angle, 01°.

0	14.8	31.46	23.31	458	0.00
10	13.88	31.53	23.55	435	0.04
20	9.86	31.90	24.59	336	0.08
30	8.99	32.02	24.81	316	0.12
40	8.02	32.31	25.18	280	0.15
50	6.53	32.55	25.57	243	0.17
75	6.00	32.78	25.82	220	0.22
100	6.43	33.12	26.04	199	0.27
125	6.41	33.50	26.34	171	0.32
150	6.43	33.76	26.54	152	0.36
200	6.19	33.88	26.66	142	0.43
300	5.78	33.93	26.75	134	0.57
400	5.21	33.98	26.86	125	0.70

HMCS CEDARWOOD; August 7, 1951; 0418 GCT; 50°29'N, 128°17.5'W; sounding, 50 fm; wind, 315°, force 3; weather, partly cloudy; sea, smooth; wire angle, 03°.

2	12.66	32.15	24.27	366	0.00
10	11.30	32.33	24.67	329	0.03
19	9.13	32.52	25.18	280	0.06
30	7.9	32.71	25.52	248	0.09
40	7.44	32.84	25.68	233	0.12
50	7.02	33.03	25.89	213	0.14
75	6.64	33.26	26.12	192	0.19

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

E10

HMCS CEDARWOOD; August 6, 1951; 1034 GCT; 51°58.5'N, 131°10'W; sounding, missing; wind, calm; weather, drizzle; sea, calm; wire angle, 05°.

D1

2	13.44	32.09	24.07	386	0.00
10	12.50	32.14	24.30	364	0.04
20	11.27	32.24	24.61	334	0.07
30	9.71	32.31	24.92	305	0.10
40	9.28	32.50	25.14	284	0.13
50	9.01	32.60	25.26	273	0.16
75	6.3	32.64	25.68	233	0.22
100	6.5	32.67	25.68	234	0.28
125	6.49	33.17	26.06	198	0.34
150	6.56	33.46	26.28	177	0.38
200	6.04	33.76	26.58	149	0.47

D2

HMCS CEDARWOOD; August 6, 1951; 2218 GCT; 50°55'N, 129°24'W; sounding, 90 fm; wind, 315°, force 2; weather, cloudy; sea, calm; wire angle, 03°.

D3

0	15.07	31.64	23.39	450	0.00
10	14.47	31.71	23.57	434	0.04
20	13.69	31.86	23.85	407	0.09
30	11.72	31.98	24.32	362	0.12
40	8.52	32.14	24.97	300	0.16
50	7.49	32.31	25.26	273	0.19
75	6.61	32.98	25.90	212	0.25
100	6.61	33.45	26.27	178	0.30
125	6.44	33.65	26.45	161	0.34
150	6.32	33.81	26.59	148	0.38

D4

HMCS CEDARWOOD; August 7, 1951; 1612, 1618 GCT; 50°27'N, 128°22.5'W; sounding, 89 fm; wind, 290°, force 3; weather, fog; sea, calm; wire angle, 00°, 00°.

C1

0	13.26	32.10	24.12	381	0.00
10	12.39	32.07	24.26	368	0.04
20	8.85	32.62	25.30	269	0.07
30	8.03	32.83	25.59	241	0.09
40	7.44	32.98	25.79	222	0.12
50	7.23	33.03	25.86	216	0.14
75	6.56	33.29	26.15	188	0.19
100	6.48	33.43	26.27	178	0.24
125	6.41	33.74	26.52	154	0.28

C2

HMCS CEDARWOOD; August 7, 1951; 2227 GCT; 50°28'N, 129°34'W; sounding, missing; wind, 315°, force 4; weather, overcast; sea, slight; wire angle, 01°.

C3

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	16.2	32.02	23.34	446	0.00
10	14.76	32.02	23.75	416	0.03
20	13.7	32.22	24.12	381	0.08
30	10.15	32.29	24.83	314	0.12
40	8.87	32.38	25.12	286	0.15
50	7.91	32.45	25.31	268	0.18
75	6.58	32.53	25.55	245	0.24
100	5.96	32.60	25.68	233	0.30
125	7.05	33.05	25.90	213	0.36
150	6.62	33.40	26.23	182	0.40
200	6.23	33.79	26.58	149	0.49
300	5.05	33.84	26.77	132	0.63
400	4.66	33.94	26.89	121	0.75
600	4.33	34.19	27.13	100	0.98
800	3.66	34.25	27.24	90	1.17
1000	3.27	34.36	27.36	80	1.34
1200	2.90	34.37	27.41	76	1.49

C4

HMCS CEDARWOOD; August 8, 1951; 1027 GCT; 50°24'N, 131°34'W; sounding, missing; wind, 340°, force 3; weather, drizzle; sea, smooth; wire angle, 02°.

C5

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	16.3	32.09	23.46	444	0.00
10	15.74	32.00	23.52	438	0.04
20	13.21	32.03	24.07	386	0.09
30	11.16	32.15	24.56	340	0.12
40	10.61	32.46	24.89	308	0.15
50	8.29	32.50	25.29	270	0.18
75	5.99	32.58	25.67	234	0.25
100	5.90	32.81	25.86	216	0.30
125	5.88	33.17	26.14	190	0.35
150	5.90	33.45	26.36	170	0.40
200	5.64	33.77	26.64	143	0.48
300	4.93	33.88	26.82	127	0.61
400	4.57	33.98	26.93	118	0.73
600	4.00	34.12	27.10	103	0.95
800	3.52	34.27	27.27	88	1.14
1000	3.20	34.31	27.33	83	1.31
1200	2.79	34.39	27.40	76	1.47

C6

HMCS CEDARWOOD; August 8, 1951; 2223 GCT; 50°19'N, 133°55'W; sounding, missing; wind, 340°, force 3; weather, overcast; sea, smooth; wire angle, 02°.

C8

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	16.2	32.03	23.44	446	0.00
10	15.72	32.33	23.78	414	0.04
20	13.93	32.41	24.22	372	0.08
30	11.61	32.50	24.73	323	0.12
40	9.23	32.55	25.18	280	0.15
50	7.68	32.55	25.42	258	0.17
75	5.90	32.58	25.67	234	0.24
100	5.69	32.62	25.74	228	0.29
125	5.64	32.83	25.90	213	0.35
150	5.88	33.45	26.36	169	0.40
200	5.46	33.74	26.64	143	0.47
300	4.81	33.86	26.82	127	0.61
400	4.36	33.93	26.91	119	0.73
600	3.85	34.13	27.13	100	0.95
800	3.47	34.27	27.27	88	1.14
1000	3.19	34.32	27.34	82	1.31
1200	2.78	34.37	27.42	75	1.46

HMCS CEDARWOOD; August 8, 1951; 0421, 0440 GCT; 50°28'N, 130°37'W; sounding, missing; wind, 290°, force 4; weather, cloudy; sea, smooth; wire angle, 02°, 03°.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	16.35	31.76	23.20	469	0.00
10	15.81	31.91	23.44	446	0.05
20	14.74	31.93	23.68	423	0.09
30	11.78	32.02	24.34	360	0.13
40	9.78	32.12	24.76	320	0.16
50	8.17	32.31	25.16	282	0.19
75	6.22	32.60	25.64	237	0.26
100	6.24	32.91	25.89	213	0.31
125	6.12	33.22	26.15	189	0.36
150	6.18	33.60	26.44	162	0.41
200	5.71	33.81	26.66	142	0.48
300	5.31	33.93	26.81	128	0.62
400	4.62	33.93	26.89	121	0.74
600	4.06	34.12	27.09	104	0.97
800	3.68	34.25	27.24	90	1.16
1000	3.32	34.36	27.36	80	1.33
1200	2.89	34.39	27.43	74	1.49

HMCS CEDARWOOD; August 8, 1951; 1624 GCT; 50°20'N, 132°52'W; sounding, missing; wind, 315°, force 3; weather, overcast; sea, slight; wire angle, 04°.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
0	16.05	32.45	23.80	411	0.00
10	15.50	32.46	23.93	399	0.04
20	14.16	32.46	24.22	372	0.08
30	12.38	32.52	24.62	334	0.11
40	10.65	32.53	24.94	304	0.15
50	9.17	32.53	25.18	281	0.18
75	6.38	32.65	25.67	234	0.24
100	5.50	32.64	25.76	226	0.30
125	5.53	32.93	26.00	203	0.35
150	5.48	33.43	26.40	165	0.40
200	5.27	33.74	26.66	141	0.47
300	4.70	33.89	26.85	124	0.61
400	4.32	33.98	26.96	114	0.73
600	3.84	34.19	27.18	95	0.94
800	3.45	34.31	27.33	82	1.11
1000	3.09	34.32	27.35	80	1.27
1200	2.71	34.39	27.45	71	1.43

HMCS CEDARWOOD; August 9, 1951; 1038 GCT; 50°19'N, 136°04'W; sounding, missing; wind, 340°, force 5; weather, overcast; sea, slight; wire angle, 04°.

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m
2	15.32	32.62	24.09	384	0.00
10	15.33	32.62	24.09	384	0.04
20	14.44	32.62	24.28	366	0.08
30	11.63	32.65	24.86	311	0.11
40	10.08	32.60	25.09	289	0.14
50	8.52	32.62	25.35	264	0.17
75	6.28	32.65	25.68	233	0.23
100	5.70	32.71	25.80	222	0.29
125	5.55	33.14	26.16	188	0.34
150	5.28	33.60	26.55	151	0.38
200	4.90	33.70	26.58	149	0.46
300	4.54	33.84	26.83	126	0.59
400	4.15	33.93	26.94	116	0.71
500	4.01	34.06	27.06	106	0.82
700	3.52	34.19	27.21	92	1.02
900	3.11	34.31	27.34	81	1.20

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

HMCS CEDARWOOD; August 9, 1951; 1627 GCT; 50°19'N, 137°05'W; sounding, missing; wind, 290°, force 4; weather, overcast; sea, slight; wire angle, 06°.

2	15.04	32.43	24.00	392	0.00
10	15.01	32.46	24.04	389	0.04
20	13.19	32.48	24.42	353	0.08
30	10.07	32.57	25.06	292	0.11
40	9.09	32.57	25.23	276	0.14
50	7.87	32.53	25.38	262	0.16
75	5.45	32.60	25.74	227	0.22
100	5.12	32.69	25.85	217	0.28
125	5.26	33.26	26.29	176	0.33
150	5.16	33.60	26.57	149	0.37
200	5.07	33.77	26.71	136	0.44
300	5.03	33.94	26.85	124	0.57
400	4.59	34.00	26.94	117	0.69
500	4.13	34.08	27.06	106	0.80
700	3.65	34.22	27.22	92	1.00
900	3.30	34.31	27.32	83	1.18

HMCS CEDARWOOD; August 10, 1951; 0428 GCT; 50°19'N, 139°17'W; sounding, missing; wind, 315°, force 1; weather, overcast; sea, smooth; wire angle, 03°.

2	14.50	32.41	24.10	383	0.00
10	14.31	32.41	24.14	379	0.04
20	10.59	32.53	24.97	300	0.07
30	8.51	32.53	25.28	271	0.10
40	7.40	32.53	25.45	254	0.13
50	6.31	32.57	25.62	238	0.15
75	4.99	32.62	25.82	220	0.21
100	4.89	32.96	26.10	193	0.26
125	5.23	33.53	26.50	156	0.30
150	5.03	33.65	26.63	144	0.34
200	4.82	33.79	26.76	132	0.41
300	4.40	33.91	26.90	119	0.54
400	4.15	34.00	27.00	111	0.65
500	3.92	34.08	27.08	104	0.76
700	3.45	34.19	27.22	91	0.95
900	3.13	34.29	27.33	82	1.13

HMCS CEDARWOOD; August 10, 1951; 1632 GCT; 49°41'N, 140°30'W; sounding, missing; wind, calm; weather, overcast; sea, calm; wire angle, 03°.

2	15.02	32.50	24.06	386	0.00
10	14.58	32.50	24.16	377	0.04
20	12.25	32.53	24.64	332	0.07
30	9.28	32.53	25.17	281	0.10
40	8.61	32.53	25.27	272	0.13
50	7.32	32.53	25.46	254	0.16
75	5.24	32.58	25.76	225	0.22
100	5.28	32.71	25.85	217	0.27
125	5.04	33.19	26.26	178	0.32
150	4.96	33.65	26.63	144	0.36
200	4.82	33.79	26.76	132	0.43
300	4.40	33.93	26.91	118	0.56
400	4.01	34.00	27.01	110	0.67
500	3.82	34.10	27.11	101	0.78

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

POG C-2

HMCS CEDARWOOD; August 9, 1951; 2226 GCT; 50°19'N, 138°12'W; sounding, missing; wind, 290°, force 3; weather, overcast; sea, smooth; wire angle, 06°. C9 C10

2	14.79	32.45	24.07	386	0.00
10	14.71	32.45	24.09	384	0.04
20	13.30	32.45	24.38	356	0.08
30	11.18	32.50	24.82	315	0.11
40	9.02	32.53	25.21	278	0.14
50	8.21	32.52	25.32	267	0.17
75	5.43	32.58	25.73	228	0.23
100	4.78	32.65	25.86	216	0.28
125	5.09	33.19	26.26	178	0.33
150	5.15	33.58	26.55	151	0.37
200	4.95	33.76	26.72	136	0.45
300	4.74	33.86	26.82	127	0.58
400	4.32	33.98	26.96	114	0.70
500	4.04	34.06	27.05	106	0.81
700	3.65	34.22	27.22	92	1.01
900	3.18	34.29	27.32	83	1.18

HMCS CEDARWOOD; August 10, 1951; 1025 GCT; 50°19'N, 140°23'W; sounding, missing; wind, 315°, force 1; weather, overcast; sea, calm; wire angle, 01°. C11 C12

2	14.66	32.45	24.10	383	0.00
10	14.28	32.48	24.20	374	0.04
20	12.80	32.50	24.52	343	0.07
30	9.64	32.50	25.08	290	0.11
40	8.08	32.53	25.36	263	0.13
50	7.50	32.53	25.44	256	0.16
75	5.52	32.58	25.72	229	0.22
100	5.08	32.62	25.80	222	0.28
125	4.95	33.26	26.32	173	0.33
150	4.86	33.55	26.56	150	0.37
200	4.61	33.76	26.76	132	0.44

HMCS CEDARWOOD; August 10, 1951; 2228 GCT; 49°03'N, 140°43'W; sounding, missing; wind, 270°, force 1; weather, overcast; sea, calm; wire angle, 02°. B1 B2

2	15.45	32.62	24.06	386	0.00
10	14.59	32.60	24.24	370	0.04
20	13.97	32.60	24.36	358	0.07
30	9.54	32.64	25.21	278	0.11
40	8.78	32.64	25.33	266	0.13
50	7.7	32.64	25.49	251	0.16
75	5.36	32.69	25.83	219	0.22
100	5.04	32.74	25.90	212	0.27
125	4.89	33.22	26.30	174	0.32
150	4.84	33.60	26.60	146	0.36
200	4.50	33.76	26.77	131	0.43
300	4.12	33.89	26.91	117	0.55
400	3.94	34.02	27.03	107	0.67
500	3.75	34.10	27.12	100	0.77
700	3.38	34.24	27.26	88	0.96
900	3.02	34.31	27.36	79	1.12

POG

C-2

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

A1

HMCS CEDARWOOD; August 11, 1951; 0429 GCT; 48°28'N, 140°53'W; sounding, missing; wind, calm; weather, cloudy; sea, calm; wire angle, 01°.

A2

2	16.28	32.52	23.81	410	0.00
10	15.0	32.53	24.08	385	0.04
20	14.51	32.53	24.20	374	0.08
30	11.93	32.62	24.78	319	0.11
40	9.16	32.67	25.30	269	0.14
50	8.78	32.72	25.39	261	0.17
75	7.06	32.83	25.73	229	0.23
100	6.05	32.86	25.88	214	0.28
125	5.80	33.07	26.08	196	0.34
150	5.23	33.64	26.59	147	0.38
200	4.80	33.74	26.72	135	0.45
300	4.20	33.86	26.88	121	0.58
400	4.04	33.98	26.99	111	0.69
500	3.78	34.10	27.11	101	0.80
700	3.40	34.22	27.24	89	0.99
900	3.06	34.31	27.35	80	1.17

A3

HMCS CEDARWOOD; August 11, 1951; 1627 GCT; 48°28'N, 138°28'W; sounding, missing; wind, calm; weather, partly cloudy; sea, calm; wire angle, 00°.

A4

2	15.90	32.57	23.93	399	0.00
10	15.6	32.57	24.00	392	0.04
20	14.99	32.57	24.12	381	0.08
30	10.74	32.71	25.06	292	0.11
40	9.68	32.74	25.26	273	0.14
50	8.50	32.78	25.49	251	0.17
75	6.40	32.79	25.78	224	0.23
99	5.77	32.79	25.86	216	0.28
125	5.54	33.22	26.22	182	0.33
150	5.34	33.64	26.58	148	0.37
200	5.00	33.74	26.70	137	0.44
300	4.49	33.84	26.83	126	0.57
400	4.06	33.98	26.99	111	0.69

A5

HMCS CEDARWOOD; August 12, 1951; 0432, 0443 GCT; 48°31'N, 136°10'W; sounding, missing; wind, calm; weather, cloudy; sea, calm; wire angle, 02°, 04°.

A6

2	16.38	32.53	23.79	412	0.00
10	16.06	32.55	23.88	404	0.04
20	13.82	32.62	24.40	355	0.08
30	10.13	32.69	25.15	283	0.11
40	9.43	32.72	25.28	271	0.14
50	8.30	32.72	25.47	253	0.16
75	6.33	32.79	25.79	223	0.22
100	5.83	32.78	25.84	218	0.30
125	5.81	33.22	26.19	185	0.33
150	5.45	33.65	26.58	148	0.37
200	5.09	33.74	26.69	138	0.44
300	4.56	33.82	26.81	128	0.58
400	4.19	33.98	26.98	112	0.70
500	3.85	34.10	27.10	102	0.80
700	3.46	34.22	27.24	90	0.99
900	3.11	34.32	27.35	80	1.16

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

HMCS CEDARWOOD; August 11, 1951; 1042 GCT; 48°28'N, 139°45'W; sounding, missing; wind, 135°, force 1; weather, partly cloudy; sea, calm; wire angle, 00°.

2	16.00	32.57	23.91	401	0.00
10	15.0	32.57	24.12	381	0.04
20	11.29	32.71	24.97	300	0.07
30	9.67	32.69	25.22	277	0.10
40	8.92	32.72	25.37	262	0.13
50	7.37	32.74	25.62	239	0.15
75	5.91	32.76	25.82	220	0.21
100	5.47	32.81	25.91	211	0.27
125	5.80	33.53	26.44	162	0.31
150	5.51	33.77	26.66	141	0.35
200	4.93	33.76	26.72	136	0.42
300	4.41	33.88	26.88	121	0.55
400	4.13	34.02	27.01	110	0.66

HMCS CEDARWOOD; August 11, 1951; 2224 GCT; 48°31'N, 137°20'W; sounding, missing; wind, 270°, force 2; weather, overcast; sea, calm; wire angle, 00°.

2	16.39	32.52	23.77	414	0.00
10	16.1	32.53	23.86	406	0.04
20	14.36	32.57	24.26	368	0.08
30	10.29	32.72	25.15	283	0.11
40	9.50	32.74	25.30	269	0.14
50	8.73	32.74	25.42	258	0.17
75	7.06	32.81	25.72	230	0.23
100	6.13	32.81	25.82	220	0.28
125	5.98	32.90	25.92	211	0.34
150	5.45	33.53	26.48	158	0.38
200	5.14	33.55	26.53	154	0.46
300	4.48	33.82	26.82	127	0.60
400	4.09	33.96	26.97	113	0.72
500	3.87	34.05	27.06	105	0.83
700	3.46	34.24	27.26	88	1.02
900	3.10	34.35	27.38	77	1.19

HMCS CEDARWOOD; August 12, 1951; 1032, 1050 GCT; 48°31'N, 135°05'W; sounding, missing; wind, 200°, force 1; weather, cloudy; sea, calm; wire angle, 00°, 00°.

2	15.81	32.58	23.96	396	0.00
10	15.76	32.62	24.00	392	0.04
20	15.70	32.60	24.00	393	0.08
30	14.30	32.58	24.28	366	0.12
40	11.61	32.60	24.82	315	0.15
50	9.39	32.62	25.22	277	0.18
75	6.92	32.62	25.58	243	0.25
100	6.08	32.65	25.71	230	0.30
125	5.79	32.72	25.80	222	0.36
150	5.71	33.10	26.10	194	0.41
200	5.27	33.70	26.64	143	0.50
300	4.90	33.86	26.81	128	0.63
400	4.28	33.96	26.95	115	0.75
500	4.00	34.03	27.04	107	0.87
700	3.59	34.20	27.21	93	1.07

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

HMCS CEDARWOOD; August 12, 1951; 1628 GCT; 48°31'N, 134°10'W; sounding, missing; wind, 180°, force 2; weather, partly cloudy; sea, calm; wire angle, 01°.

2	15.91	32.52	23.89	403	0.00
10	15.85	32.52	23.90	402	0.04
20	14.50	32.55	24.22	372	0.08
30	11.89	32.53	24.72	324	0.11
40	10.08	32.57	25.07	291	0.14
50	8.31	32.65	25.41	259	0.17
75	6.46	32.62	25.64	237	0.23
100	5.74	32.72	25.80	222	0.29
125	5.66	32.98	26.02	201	0.34
150	5.60	33.41	26.37	168	0.39
200	5.35	33.76	26.67	140	0.47
300	4.63	33.86	26.84	125	0.60
400	4.21	33.98	26.97	113	0.72
500	4.02	34.06	27.06	106	0.83
700	3.60	34.24	27.24	90	1.02
900	3.26	34.34	27.36	79	1.19

HMCS CEDARWOOD; August 13, 1951; 0423 GCT; 48°36'N, 131°47'W; sounding, missing; wind, 180°, force 3; weather, overcast; sea, smooth; wire angle, 07°.

2	15.98	32.41	23.78	413	0.00
10	15.9	32.41	23.80	412	0.04
20	15.69	32.41	23.85	407	0.08
30	12.28	32.40	24.54	342	0.12
40	9.98	32.45	24.99	299	0.15
50	7.84	32.48	25.35	264	0.18
75	6.74	32.53	25.54	246	0.24
100	6.46	32.55	25.58	243	0.30
125	6.15	32.64	25.69	233	0.36
150	6.20	33.07	26.02	202	0.42
200	6.17	33.67	26.50	157	0.51
300	5.19	33.86	26.78	131	0.65
400	4.48	33.98	26.95	116	0.78
500	4.20	34.03	27.01	110	0.89
700	3.78	34.20	27.19	95	1.09
900	3.39	34.29	27.30	85	1.27

HMCS CEDARWOOD; August 13, 1951; 1628 GCT; 48°41'N, 129°34'W; sounding, missing; wind, 180°, force 3; weather, overcast; sea, smooth; wire angle, 06°.

2	16.04	32.19	23.60	430	0.00
10	16.01	32.15	23.58	433	0.04
20	14.53	32.12	23.88	404	0.08
30	11.80	32.21	24.49	346	0.12
40	9.38	32.26	24.93	304	0.16
50	8.45	32.36	25.16	282	0.19
75	6.97	32.50	25.48	252	0.25
100	6.36	32.58	25.62	239	0.31
125	6.78	33.08	25.96	207	0.37
150	7.05	33.46	26.23	182	0.42
200	7.04	33.82	26.51	156	0.50
300	6.20	33.94	26.71	138	0.65
400	5.40	34.00	26.85	126	0.78
500	5.02	34.05	26.94	118	0.91
700	4.31	34.22	27.15	99	1.12

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

HMCS CEDARWOOD; August 12, 1951; 2228 GCT; 48°32'N, 133°00'W; sounding, missing; wind, 200°, force 2; weather, overcast; sea, calm; wire angle, 10°.

2	16.53	32.62	23.82	410	0.00
10	16.30	32.62	23.88	404	0.04
20	16.27	32.62	23.89	403	0.08
30	12.35	32.62	24.69	327	0.12
40	9.32	32.62	25.23	276	0.15
50	7.74	32.65	25.50	250	0.17
75	6.42	32.65	25.67	234	0.23
100	6.07	32.71	25.76	226	0.29
125	5.66	32.86	25.92	211	0.35
150	5.56	33.36	26.33	172	0.39
200	5.13	33.74	26.68	139	0.47
300	4.65	33.86	26.83	126	0.60
400	4.29	33.96	26.95	115	0.73
500	4.05	34.02	27.02	109	0.84
700	3.58	34.19	27.20	94	1.04
900	3.24	34.27	27.30	85	1.22

HMCS CEDARWOOD; August 13, 1951; 1035 GCT; 48°38'N, 130°40'W; sounding, missing; wind, 180°, force 3; weather, overcast; sea, calm; wire angle, 05°.

2	16.00	32.29	23.69	422	0.00
10	15.96	32.31	23.72	419	0.04
20	14.90	32.31	23.94	398	0.08
30	12.85	32.40	24.43	352	0.12
40	11.81	32.43	24.66	330	0.15
50	10.00	32.46	25.00	298	0.19
75	6.76	32.53	25.54	247	0.25
100	6.26	32.57	25.63	238	0.31
125	6.24	32.74	25.76	226	0.37
150	6.21	33.17	26.10	194	0.43
200	5.88	33.69	26.56	151	0.51
300	5.03	33.88	26.80	129	0.65
400	4.51	33.94	26.91	119	0.78
500	4.25	34.06	27.03	109	0.89
700	3.83	34.17	27.16	98	1.10
900	3.48	34.27	27.28	87	1.28

HMCS CEDARWOOD; August 13, 1951; 2225 GCT; 48°44'N, 128°22'W; sounding, missing; wind, 160°, force 3; weather, overcast; sea, calm; wire angle, 06°.

2	15.91	32.12	23.58	432	0.00
10	15.9	32.10	23.56	435	0.04
20	15.55	32.14	23.67	424	0.09
30	13.57	32.12	24.07	386	0.13
40	10.80	32.24	24.68	328	0.17
50	9.76	32.31	24.92	306	0.20
75	7.07	32.48	25.46	254	0.27
100	6.47	32.55	25.58	243	0.33
125	6.84	33.14	26.00	204	0.38
150	6.92	33.58	26.34	172	0.43
200	6.71	33.86	26.58	150	0.51
300	5.98	33.96	26.75	134	0.65
400	5.50	34.03	26.87	124	0.78
500	5.20	34.06	26.93	119	0.90
700	4.22	34.17	27.12	102	1.13
900	3.68	34.27	27.26	90	1.32

POG

C-2

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

A13

HMCS CEDARWOOD; August 14, 1951; 0425 GCT; 48°38'N, 127°10'W; sounding, missing; wind, 135°, force 3; weather, cloudy; sea, smooth; wire angle,

A14

02°.

2	16.55	32.12	23.44	446	0.00
10	16.5	32.12	23.44	446	0.04
20	14.85	32.19	23.86	406	0.09
30	9.26	32.31	25.00	298	0.12
40	7.99	32.46	25.31	268	0.15
50	7.21	32.46	25.42	258	0.18
75	7.06	32.76	25.67	234	0.24
100	7.08	33.29	26.09	195	0.29
125	7.16	33.64	26.36	170	0.34
150	7.17	33.79	26.48	158	0.38
200	6.66	33.91	26.63	145	0.46
300	5.82	33.94	26.76	133	0.59
400	5.22	34.03	26.90	121	0.72
500	5.17	34.05	26.93	119	0.84
700	4.61	34.13	27.04	110	1.07
900	4.10	34.25	27.20	96	1.28

A15

HMCS CEDARWOOD; August 14, 1951; 1612 GCT; 48°32.5'N, 124°57.5'W; sounding, 35 fm; wind, calm; weather, cloudy; sea, calm; wire angle,

A16

00°.

2	11.39	31.17	23.76	415	0.00
10	9.56	31.90	24.62	333	0.04
20	8.78	32.67	25.36	263	0.07
30	8.67	32.88	25.54	246	0.09
40	7.92	33.10	25.82	220	0.12
50	7.20	33.52	26.26	178	0.14

OBSERVED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ cl/ton	ΔD dyn m

HMCS CEDARWOOD; August 14, 1951; 1011 GCT; 48°36'N, 125°57'W; sounding, 53 fm; wind, calm; weather, cloudy; sea, calm; wire angle, 00°.

2	13.06	32.26	24.28	366	0.00
10	8.02	32.43	25.28	270	0.03
20	7.16	32.52	25.48	252	0.06
30	6.76	32.67	25.64	236	0.08
40	6.65	32.72	25.70	231	0.11
50	6.67	32.86	25.80	222	0.13
75	6.99	33.50	26.26	178	0.18
100	6.81	33.76	26.49	157	0.22

HMCS CEDARWOOD; August 14, 1951; 1731 GCT; 48°30.5'N, 124°44'W; sounding, 120 fm; wind, calm; weather, overcast; sea, calm; wire angle, 00°.

2	11.18	31.19	23.81	410	0.00
10	11.1	31.29	23.90	402	0.04
20	9.93	31.76	24.46	349	0.08
30	9.16	32.17	24.90	307	0.11
40	8.61	32.53	25.28	271	0.14
50	8.50	32.60	25.34	265	0.17
75	7.47	33.50	26.20	184	0.22
100	7.12	33.64	26.36	169	0.27
125	6.97	33.76	26.47	159	0.31
150	6.90	33.84	26.54	153	0.35

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δT_3	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m
USS MARYSVILLE; June 7, 1951; 1500, missing GCT; 31°57'N, 120°56'W; sounding, 1875 fm; wind, 315°, 22 kt; weather, cloudy; sea, rough.								1
0	15.27	33.06	0	15.27	33.06	24.44	350	0.00
55	13.24	33.10	50	13.50	33.09	24.84	312	0.17
110	10.40	33.30	100	10.98	33.22	25.42	257	0.31
165	8.81	33.71	150	9.04	33.59	26.03	199	0.43
221	8.30	33.89	200	8.51	33.84	26.31	172	0.52
276	7.68	33.96	250	7.99	33.93	26.46	158	0.60
333	7.02	34.02	300	7.42	33.99	26.59	146	0.68
445	5.91	34.11	350	6.90	34.03	26.69	136	0.76
560	5.21	34.23	400	6.40	34.08	26.80	126	0.82
			450	5.90	34.11	26.88	118	0.89
549a)	5.48	34.18	500	5.63	34.15	26.95	112	0.95
604	5.16	34.23	550	5.42	34.18	27.00	107	1.01
660	4.80	34.25	600	5.19	34.22	27.06	101	1.06
716	4.65	34.31	650	4.85	34.25	27.12	95	1.11
772	4.54	34.34	700	4.69	34.29	27.17	91	1.16
827	4.39	34.36	750	4.60	34.33	27.21	87	1.21
883	4.23	34.40	800	4.44	34.35	27.24	84	1.26
1107	3.63	34.46	900	4.19	34.41	27.32	76	1.35
			1000	3.88	34.44	27.38	71	1.43
			1100	3.64	34.46	27.41	68	1.51
USS MARYSVILLE; June 9, 1951; 1722 GCT; 29°12'N, 121°01.5'W; sounding, 2190 fm; wind, 360°, 13 kt; weather, cloudy; sea, moderate.								2
0	16.60	33.33	0	16.60	33.33	24.35	359	0.00
51	16.00	33.27	50	16.06	33.28	24.43	351	0.18
101	13.71	33.10	100	14.00	33.10	24.75	321	0.35
152	11.19	33.40	150	11.35	33.35	25.45	254	0.49
204	9.30	33.70	200	9.48	33.67	26.02	200	0.61
255	8.27	33.95	250	8.35	33.94	26.42	162	0.70
306	7.66	34.00	300	7.70	34.00	26.56	149	0.78
410	6.47	34.13	350	7.06	34.05	26.68	137	0.85
514	5.88	34.27	400	6.54	34.11	26.81	125	0.92
453	6.31	34.14	450	6.20	34.17	26.89	117	0.98
503	6.24	34.23	500	5.94	34.23	26.98	109	1.04
554	5.67	34.25	550	5.70	34.27	27.04	103	1.10
606	5.55	34.31	600	5.59	34.31	27.08	99	1.16
657	5.28	34.34	650	5.31	34.34	27.13	94	1.21
710	5.05	34.34	700	5.10	34.34	27.17	91	1.26
764	4.83	34.38	750	4.89	34.37	27.21	87	1.30
988	4.05	34.43	800	4.70	34.39	27.25	83	1.35
970	4.21	34.43	900	4.39	34.41	27.30	78	1.44
1140	3.73	34.47	1000	4.12	34.43	27.34	74	1.53
1312	3.18	34.49	1100	3.86	34.46	27.39	70	1.61
1487	2.82	34.52	1200	3.54	34.48	27.44	65	1.68
1664	2.64	34.56	1400	2.99	34.50	27.52	58	1.83
1844	2.35	34.56	1600	2.71	34.55	27.58	52	1.96
2303	1.90	34.61	1800	2.46	34.56	27.60	50	2.08
2778	1.71	34.63	2000	2.12	34.58	27.65	45	2.19
			2200	1.97	34.60	27.68	42	2.30
			2400	1.89	34.61	27.69	41	2.40
			2600	1.80	34.62	27.70	40	2.50
			2800	(1.71)	(34.63)	(27.72)	(38)	(2.60)

a) Overlapping casts.

	OBSERVED			INTERPOLATED			COMPUTED		
	Z	T	S	Z	T	S	σ_t	δ_{T_3}	ΔD
	m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m
3	USS MARYSVILLE; June 12, 1951; 0725 GCT; 27°46'N, 120°54'W; sounding, 2250 fm; wind, 340°, 14 kt; weather, cloudy; sea, missing.								
	0	17.00	33.35	0	17.00	33.35	24.27	366	0.00
	49	16.53	33.39	50	16.52	33.39	24.41	353	0.18
	98	15.46	33.30	100	15.35	33.30	24.61	334	0.35
	149	11.43	33.40	150	11.35	33.41	25.50	249	0.50
	194	9.40	33.77	200	9.36	33.78	26.12	190	0.61
	250	8.60	33.94	250	8.60	33.94	26.38	166	0.70
	301	7.87	33.98	300	7.90	33.98	26.51	153	0.78
	406	6.76	34.09	350	7.29	34.01	26.62	143	0.86
	512	6.18	34.23	400	6.81	34.08	26.74	131	0.93
	567	5.88	34.09	450	6.50	34.16	26.85	121	1.00
	625	5.53	34.29	500	6.23	34.22	26.93	114	1.06
	686	5.19	34.31	550	5.94	34.25	26.99	108	1.12
	742	5.04	34.34	600	5.69	34.28	27.04	103	1.17
	800	4.84	34.36	650	5.37	34.30	27.10	97	1.23
	858	4.57	34.38	700	5.13	34.32	27.14	93	1.28
	917	4.34	34.42	750	5.01	34.34	27.17	90	1.33
	1153	3.63	34.47	800	4.84	34.36	27.21	87	1.38
	1002	4.04	34.43	850	4.60	34.38	27.25	83	1.42
	1177	3.59	34.47	900	4.40	34.40	27.29	79	1.47
	1353	3.09	34.52	1000	4.03	34.43	27.35	74	1.56
	1531	2.81	34.56	1200	3.49	34.47	27.44	65	1.71
	1712	2.53	34.56	1500	2.87	34.56	27.57	53	1.92
	1894	2.28	34.60	2000	2.15	34.60	27.66	44	2.21
	2358	1.84	34.61	2500	1.81	34.62	27.70	40	2.46
	2824	1.68	34.63	2800	1.69	34.63	27.72	38	2.61
4	USS MARYSVILLE; June 13, 1951; 1701 GCT; 29°40'N, 120°58'W; sounding, 2210 fm; wind, 230°, 6 kt; weather, overcast; sea, missing.								
	0	17.39	33.46	0	17.39	33.46	24.26	367	0.00
	51	16.83	33.38	50	16.90	33.38	24.31	362	0.18
	103	11.14	33.30	100	11.20	33.31	25.45	254	0.34
	154	9.62	33.73	150	9.75	33.63	25.95	207	0.45
	205	8.82	33.96	200	8.91	33.94	26.33	171	0.55
	257	8.33	34.05	250	8.40	34.04	26.48	156	0.63
	309	7.68	34.13	300	7.77	34.12	26.64	141	0.71
	411	6.80	34.21	350	7.37	34.17	26.74	132	0.78
	514	5.83	34.20	400	6.96	34.20	26.82	124	0.85
	484	6.08	34.23	450	6.37	34.22	26.91	115	0.91
	533	5.72	34.23	500	5.95	34.23	26.98	109	0.97
	582	5.50	34.29	550	5.66	34.24	27.02	105	1.03
	630	5.32	34.29	600	5.44	34.29	27.08	99	1.08
	679	5.16	34.34	650	5.25	34.31	27.12	95	1.13
	728	4.89	34.34	700	5.01	34.34	27.17	90	1.18
	776	4.72	34.34	750	4.80	34.34	27.20	88	1.23
	972	4.10	34.43	800	4.65	34.34	27.22	86	1.28
	1151	3.59	34.45	900	4.32	34.39	27.29	79	1.37
	1344	3.13	34.53	1000	4.01	34.44	27.36	73	1.46
	1538	2.69	34.56	1100	3.73	34.44	27.39	70	1.54
	1732	2.42	34.52	1200	3.47	34.46	27.43	66	1.61
	1926	2.19	34.60	1500	2.78	34.56	27.58	52	1.82
	2121	1.99	34.57	2000	2.10	34.59	27.66	45	2.11
	2610	1.78	34.61	2500	1.81	34.60	27.69	41	2.37
	3101	1.66	34.61	3000	1.68	34.61	27.71	40	2.62
				3200	(1.62)	(34.61)	(27.71)	(39)	(2.72)

USS MARYSVILLE; June 14, 1951; 2105 GCT; 30°43'N, 120°05'W; sounding, 2150 fm; wind, 160°, 7 kt; weather, partly cloudy; sea missing.

OBSERVED			INTERPOLATED			COMPUTED		
Z	T	S	Z	T	S	σ_t	δT_3	ΔD
m	°C	‰	m	°C	‰	g/L	10^{-5} cm/g	dyn. m
0	17.87	33.26	0	17.87	33.26	23.99	393	0.00
50	15.96	33.33	50	15.96	33.33	24.49	345	0.18
100	12.77	33.37	100	12.77	33.37	25.20	278	0.34
150	9.68	33.48	150	9.68	33.48	25.84	217	0.47
200	8.44	33.89	200	8.44	33.89	26.36	168	0.56
250	7.83	33.96	250	7.83	33.96	26.50	154	0.65
300	7.06	34.02	300	7.06	34.02	26.66	139	0.72
400	6.10	34.11	350	6.50	34.11	26.81	125	0.79
500	5.67	34.16	400	6.10	34.16	26.90	116	0.85
502	5.65	34.18	450	5.84	34.17	26.94	113	0.91
553	5.38	34.22	500	5.67	34.18	26.97	110	0.97
603	5.08	34.25	550	5.40	34.21	27.03	104	1.03
653	4.87	34.29	600	5.09	34.24	27.08	99	1.08
703	4.79	34.31	650	4.89	34.29	27.14	93	1.14
753	4.61	34.34	700	4.79	34.31	27.18	90	1.18
805	4.51	34.36	750	4.65	34.34	27.22	86	1.23
1006	3.93	34.47	800	4.56	34.36	27.24	84	1.28
1180	3.50	34.45	850	4.42	34.38	27.27	81	1.32
1380	3.09	34.51	900	4.28	34.41	27.31	77	1.37
1580	2.63	34.52	1000	3.96	34.47	27.39	70	1.45
1780	2.36	34.61	1200	3.47	34.45	27.42	67	1.61
1980	2.14	34.60	1500	2.80	34.51	27.54	56	1.82
2180	1.94	34.60	2000	2.12	34.60	27.67	44	2.11
2680	1.74	34.65	2500	1.82	34.63	27.72	39	2.37
3180	1.63	34.65	3000	1.68	34.65	27.74	37	2.61
			3200	(1.63)	(34.65)	(27.75)	(36)	(2.70)

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

USS BURTON ISLAND; January 31, 1951; 1500 GCT; 60°37'N, 171°44'W; sounding, 58 m; wind, 060°, force 5; weather, cloudy. 1

0	-1.70	31.74	25.55	0	-1.70	31.74	25.55	244	0.00
5	-1.69	31.74	25.55	10	-1.69	31.74	25.55	244	0.02
10	-1.69	-	-	20	-1.71	31.74	25.55	244	0.05
20	-1.71	31.74	25.55	30	-1.70	31.78	25.59	241	0.07
30	-1.70	31.78	25.59	50	-1.64				
50	-1.64	-	-						

USS BURTON ISLAND; January 31, 1951; 1800 GCT; 61°04'N, 171°58'W; sounding, 62 m; wind, 060°, force 5; weather, missing. 2

0	-1.70	31.92	25.70	0	-1.70	31.92	25.70	230	0.00
5	-1.70	32.00	25.76	10	-1.69	31.92	25.70	230	0.02
10	-1.69	31.92	25.70	20	-1.68	31.92	25.70	230	0.05
20	-1.68	31.92	25.70	30	-1.70	31.93	25.71	229	0.07
30	-1.70	31.93	25.71	50	-1.70	31.96	25.73	227	0.12
50	-1.70	31.96	25.73						

USS BURTON ISLAND; February 1, 1951; 0000 GCT; 61°30'N, 171°58'W; sounding, 55 m; wind, 040°, force 5; weather, partly cloudy. 3

0	-1.70	31.74	25.55	0	-1.70	31.74	25.55	244	0.00
5	-1.69	31.78	25.59	10	-1.68	31.76	25.57	242	0.02
10	-1.68	31.76	25.57	20	-1.68	31.74	25.55	244	0.05
20	-1.68	31.74	25.55	30	-1.70	31.71	25.53	246	0.07
30	-1.70	31.71	25.53						
45	-1.68	31.76	25.57						

USS BURTON ISLAND; February 1, 1951; 0700 GCT; 61°53'N, 171°50'W; sounding, 55 m; wind, 040°, force 5; weather, clear. 4

0	-1.71	31.73	25.55	0	-1.71	31.73	25.55	245	0.00
5	-1.70	31.78	25.59	10	-1.70	31.81	25.61	239	0.02
10	-1.70	-	-	20	-1.69	31.85	25.64	235	0.05
20	-1.69	31.85	25.64	30	-1.71	31.83	25.63	237	0.07
30	-1.71	31.56u	25.41	50	-1.71	31.78	25.59	240	0.12
50	-1.71	31.78	25.59						

USS BURTON ISLAND; February 1, 1951; 1200 GCT; 62°23'N, 171°50'W; sounding, 51 m; wind, missing; weather, missing. 5

0	-1.74	32.31	26.02	0	-1.74	32.31	26.02	200	0.00
5	-1.74	32.30	26.01	10	-1.71	32.27	25.98	203	0.02
10	-1.71	32.27	25.98	20	-1.71	32.23	25.95	206	0.04
20	-1.71	32.23	25.95	30	-1.71	32.21	25.93	208	0.06
40	-1.72	32.21	25.93						

USS BURTON ISLAND; February 1, 1951; 1700 GCT; 62°48'N, 171°54'W; sounding, 53 m; wind, 030°, force 7; weather, clear. 6

0	-1.74	-	-	0	-1.74				
5	-1.74	33.78u	27.21	10	-1.74				
10	-1.74	-	-	20	-1.74	32.41	26.10	192	
20	-1.74	32.41	26.10	30	-1.76	32.50	26.17	185	
30	-1.76	32.50	26.17	50	-1.76	33.13	26.68	137	
50	-1.76	33.13	26.68						

USS BURTON ISLAND; February 1, 1951; 2300 GCT; 63°22'N, 172°17'W; sounding, 66 m; wind, 030°, force 8; weather, clear. 7

0	-1.76	32.68	26.32	0	-1.76	32.68	26.32	172	0.00
5	-1.76	32.72	26.35	10	-1.74	32.65	26.29	174	0.02
10	-1.74	32.65	26.29	20	-1.73	32.65	26.29	174	0.04
20	-1.73	32.65	26.29	30	-1.76	32.66	26.30	173	0.05
30	-1.76	32.66	26.30	50	-1.76	32.68	26.32	171	0.09
55	-1.76	32.68	26.32						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m
8	USS BURTON ISLAND; February 2, 1951; 0800 GCT; 63°40'N, 172°17'W; sounding, 46 m; wind, 050°, force 5; weather, missing.								
0	-1.74	32.66	26.30	0	-1.74	32.66	26.30	173	0.00
5	-1.74	32.79	26.40	10	-1.74	32.54	26.20	182	0.02
10	-1.74	32.54	26.20	20	-1.74	32.72	26.35	168	0.04
20	-1.74	32.72	26.35	30	-1.76	32.77	26.39	164	0.05
30	-1.76	32.77	26.39						
40	-1.75	32.75	26.37						
9	USS BURTON ISLAND; February 2, 1951; 1800 GCT; 64°02'N, 171°05'W; sounding, 27 m; wind, 030°, force 8; weather, clear.								
0	-1.76	29.88	24.05	0	-1.76	29.88	24.05	387	0.00
5	-1.74	32.77u	26.39	10	-1.77	32.40	26.09	193	0.03
10	-1.77	32.40	26.09						
15	-1.78	31.76u	25.57						
10	USS BURTON ISLAND; February 3, 1951; 0000 GCT; 64°15'N, 170°39'W; sounding, 33 m; wind, 020°, force 6; weather, clear.								
0	-1.77	33.15	26.70	0	-1.77	33.15	26.70	135	0.00
5	-1.77	33.08	26.64	10	-1.77	33.04	26.61	144	0.01
10	-1.77	33.04	26.61	20	-1.78	33.03	26.60	144	0.03
20	-1.78	33.03	26.60	30	-1.78	33.04	26.61	144	0.04
30	-1.78	33.04	26.61						
11	USS BURTON ISLAND; February 3, 1951; 1500 GCT; 64°39'N, 169°46'W; sounding, 46 m; wind, 010°, force 5; weather, clear.								
0	-1.80	33.39	26.89	0	-1.80	33.39	26.89	117	0.00
5	-1.79	33.31	26.83	10	-1.79	33.44	26.93	113	0.01
10	-1.79	33.44	26.93	20	-1.79	33.33	26.84	121	0.02
20	-1.79	33.33	26.84	30	-1.78	33.31	26.83	123	0.04
30	-1.78	33.31	26.83						
40	-1.79	33.21	26.75						
12	USS BURTON ISLAND; February 4, 1951; 2100 GCT; 64°46'N, 169°36'W; sounding, 48 m; wind, 020°, force 5; weather, clear.								
0	-1.93u	33.75u	27.19	0		33.75			
5	-1.80	33.53	27.01	10	-1.79	33.71	27.15	92	
10	-1.79	33.71	27.15	20	-1.78	33.33	26.84	121	
20	-1.78	33.33	26.84	30	-1.81	33.15	26.70	135	
30	-1.81	33.15	26.70						
45	-1.81	32.86	26.46						
13	USS BURTON ISLAND; February 7, 1951; 2100 GCT; 64°23'N, 169°03'W; sounding, 42 m; wind, 030°, force 4; weather, partly cloudy.								
0	-1.79	33.26	26.79	0	-1.79	33.26	26.79	127	0.00
5	-1.78	33.21	26.75	10	-1.78	33.17	26.71	134	0.01
10	-1.78	33.17	26.71	20	-1.79	33.22	26.75	130	0.03
15	-1.76	33.22	26.75	30	-1.79	33.12	26.67	137	0.04
20	-1.79	33.22	26.75						
30	-1.79	33.12	26.67						
14	USS BURTON ISLAND; February 8, 1951; 2000 GCT; 64°24'N, 168°34'W; sounding, 42 m; wind, 010°, force 3; weather, partly cloudy.								
0	-1.76	32.95	26.53	0	-1.76	32.95	26.53	151	0.00
5	-1.77	32.94	26.53	10	-1.75	32.95	26.53	151	0.02
10	-1.75	32.95	26.53	20	-1.75	32.87	26.47	157	0.03
15	-1.74	32.86	26.46	30	-1.76	33.09	26.65	140	0.04
25	-1.76	32.95	26.53						
35	-1.76	33.30	26.82						

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

USS BURTON ISLAND; February 9, 1951; 1600 GCT; 64°42'N, 168°03'W; sounding, 37 m; wind, 020°, force 3; weather, clear. 15

0	-1.82	33.93	27.33	0	-1.82	33.93	27.33	75	0.00
5	-1.82	33.93	27.33	10	-1.81	33.90	27.31	78	0.01
10	-1.81	-	-	20	-1.82	33.95	27.35	74	0.02
15	-1.80	33.87	27.28	30	-1.83	33.89	27.30	78	0.02
20	-1.82	33.95	27.35						
30	-1.83	33.89	27.30						

USS BURTON ISLAND; February 12, 1951; 0900 GCT; 64°54'N, 167°31'W; sounding, 31 m; wind, 160°, force 3; weather, cloudy. 16

0	-1.78	33.38	26.88	0	-1.78	33.38	26.88	118	0.00
5	-1.79	33.38	26.88	10	-1.79	33.39	26.89	117	0.01
10	-1.79	33.39	26.89	20	-1.78	33.39	26.89	117	0.02
15	-1.79	33.40	26.90	30	-1.79	33.38	26.88	117	0.04
20	-1.78	33.39	26.89						
30	-1.79	33.38	26.88						

USS BURTON ISLAND; February 12, 1951; 2000 GCT; 64°51'N, 167°32'W; sounding, 33 m; wind, 140°, force 2; weather, intermittent slight fall of snowflakes. 17

0	-1.79	33.40	26.90	0	-1.79	33.40	26.90	116	0.00
5	-1.79	33.40	26.90	10	-1.79	33.41	26.91	115	0.01
10	-1.79	33.41	26.91	20	-1.79	33.40	26.90	116	0.02
15	-1.80	33.40	26.90	30	-1.79	33.40	26.90	116	0.04
20	-1.79	33.40	26.90						
30	-1.79	33.40	26.90						

USS BURTON ISLAND; February 15, 1951; 1800 GCT; 64°20'N, 167°11'W; sounding, 29 m; wind, 010°, force 6; weather, cloudy. 18

0	-1.79	33.88	27.29	0	-1.79	33.88	27.29	79	0.00
5	-1.86	34.09	27.46	10	-1.78	34.17	27.52	57	0.01
10	-1.78	34.17	27.52	20	-1.79				
15	-1.80	32.97u	26.55						
25	-1.79	30.19u	24.30						

USS BURTON ISLAND; February 17, 1951; 1700 GCT; 63°58'N, 166°53'W; sounding, 33 m; wind, 340°, force 4; weather, partly cloudy. 19

0	-1.80	-	-	0	-1.80				
5	-1.82	32.93u	26.52	10	-1.76	32.40	26.09	193	
10	-1.76	32.40u	26.09	20	-1.79	32.84	26.45	159	
15	-1.78	32.96u	26.54	30	-1.78	33.13	26.68	137	
20	-1.79	32.84u	26.45						
30	-1.78	33.13u	26.68						

USS BURTON ISLAND; February 19, 1951; 0500 GCT; 63°34'N, 166°47'W; sounding, 29 m; wind, 320°, force 3; weather, clear. 20

0	-1.77	32.72	26.35	0	-1.77	32.72	26.35	168	0.00
5	-1.76	32.77	26.39	10	-1.75	32.66	26.30	173	0.02
10	-1.75	32.66	26.30	20	-1.74	32.45	26.13	189	0.04
15	-1.75	32.55	26.21						
23	-1.74	32.39	26.08						

USS BURTON ISLAND; February 20, 1951; 0400 GCT; 63°09'N, 166°48'W; sounding, 27 m; wind, 180°, force 2; weather, clear. 21

0	-1.78	32.42	26.11	0	-1.78	32.42	26.11	192	0.00
5	-1.78	32.43	26.11	10	-1.79	32.94	26.53	151	0.02
10	-1.79	32.94	26.53	20	-1.75	32.95	26.53	151	0.03
15	-1.77	32.94	26.53						
20	-1.75	32.95	26.53						

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SIO
CRUISE 2

OBSERVED			COMPUTED	INTERPOLATED			COMPUTED		
Z	T	S	σ_t	Z	T	S	σ_t	δ	ΔD
m	°C	‰	g/L	m	°C	‰	g/L	cl/ton	dyn m

22 USS BURTON ISLAND; February 22, 1951; 0500 GCT; 63°06'N, 167°20'W; sounding, 33 m; wind, 170°, force 5; weather, cloudy.

0	-1.78	32.80	26.41	0	-1.78	32.80	26.41	162	0.00
5	-1.78	32.82	26.43	10	-1.79	32.77	26.39	165	0.02
10	-1.79	32.77	26.39	20	-1.77	32.79	26.41	163	0.03
15	-1.78	32.79	26.41						
26	-1.77	32.79	26.41						

23 USS BURTON ISLAND; February 22, 1951; 2300 GCT; 62°13'N,[a] 167°13'W; sounding, 35 m; wind, 030°, force 4; weather, intermittent slight fall of snowflakes.

0	-1.68	31.35	25.24	0	-1.68	31.35	25.24	274	0.00
5	-1.69	31.35	25.24	10	-1.70	31.36	25.25	273	0.03
10	-1.70	31.36	25.25	20	-1.69	31.35	25.24	274	0.06
20	-1.69	31.35	25.24	30	-1.67	31.35	25.24	274	0.08
30	-1.67	31.35	25.24						

24 USS BURTON ISLAND; February 23, 1951; 0800 GCT; 61°25'N, 169°20'W; sounding, 37 m; wind, 320°, force 9; weather, overcast.

0	-1.73	31.82	25.62	0	-1.73	31.82	25.62	238	0.00
5	-1.72	31.87	25.66	10	-1.70	31.80	25.60	239	0.02
10	-1.70	31.80	25.60	20	-1.70	31.78	25.59	241	0.05
15	-1.70	31.80	25.60	30	-1.70	31.60	25.44	255	0.07
25	-1.70	31.71	25.53						
35	-1.71	31.44	25.31						

25 USS BURTON ISLAND; February 22, 1951; 1700 GCT;[b] 60°41'N, 170°56'W; sounding, 62 m; wind, 300°, force 6; weather, cloudy.

0	-1.70	31.78	25.59	0	-1.70	31.78	25.59	241	0.00
5	-1.71	31.73	25.55	10	-1.70	31.83	25.63	237	0.02
10	-1.70	31.83	25.63	20	-1.70	31.73	25.55	245	0.05
20	-1.70	31.73	25.55	30	-1.68	31.76	25.57	242	0.07
30	-1.68	31.76	25.57	50	-1.69	31.82	25.62	237	0.12
55	-1.70	31.83	25.63						

26 USS BURTON ISLAND; February 23, 1951; 1400 GCT; 59°55'N, 171°23'W; sounding, 73 m; wind, missing; weather, intermittent slight fall of snowflakes.

0	-1.72	31.87	25.66	0	-1.72	31.87	25.66	234	0.00
10	-1.70	31.85	25.64	10	-1.70	31.85	25.64	235	0.02
19	-1.70	31.83	25.63	20	-1.70	31.83	25.63	237	0.05
29	-1.69	31.83	25.63	30	-1.69	31.83	25.63	237	0.07
48	-1.69	31.83	25.63	50	-1.69	31.83	25.63	237	0.12
65	-1.74	31.83	25.63						

a) The latitude of Sta. 23 appears to be incorrect on the original data sheet (63°13'N). The position reported here, 62°13'W, is based on the times between Stas. 22, 23 and 24 and the distance involved.

b) Time of Sta. 25 appears to be incorrect; stations were numbered in accordance with chronological sequence.

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